



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of Environmental Quality

Amanda Smith
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

Water Quality Board
Paula Doughty, *Chair*
Steven P. Simpson, *Vice Chair*
Myron E. Bateman
Clyde L. Bunker
Merritt K. Frey
Darrell H. Mensel
Leland J. Myers
Neal L. Peacock
Gregory L. Rowley
Amanda Smith
Daniel C. Snarr
Jeffery L. Tucker
Walter L. Baker
Executive Secretary

Utah Water Quality Board Meeting
DEQ Building Board Room #1015
195 North 1950 West
Salt Lake City, Utah 84116
January 25, 2012

Board Meeting Begins @ 9:00 a.m. **AGENDA**

- A. **Water Quality Board Meeting – Roll Call**
- B. (Tab 1) **Minutes:**
 - 1. Approval of Minutes for December 5, 2011 Paula Doughty
- C. **Executive Secretary's Report** Walt Baker
- D. (Tab 2) **Operator Certification Council Appointments** Judy Etherington
- E. (Tab 3) **Funding Requests:**
 - 1. Financial Status Report Emily Cantón
 - 2. Coalville City Request for Authorization Lisa Nelson
- F. (Tab 4) **Rulemaking:**
 - 1. Adoption of Rule Changes to R317-2 Standards of Quality for Waters of the State
Subsequent to Triennial Review Chris Bittner
 - 2. Request to Adopt Rule Changes to R317-8-9 Pesticide Rule John Kennington
- G. (Tab 5) **Other Business:**
 - 1. Refinement of Utah Beneficial Aquatic Life Uses Ben Holcomb

Work Meeting will begin at 12:30 p.m.

- 1. Discussion of 2012 Work Mtg topics Walt Baker
- 2. Policy Discussion on Areawide Water Quality Management Planning/208 Plan Updates ..Dave Wham

Next Meeting – February 22, 2012

DEQ Building Board Room #1015
195 North 1950 West
Salt Lake City, Utah 84116

195 North 1950 West • Salt Lake City, UT
Mailing Address: P.O. Box 144870 • Salt Lake City, UT 84114-4870
Telephone (801) 536-4300 • Fax (801) 536-4301 • T.D.D. (801) 536-4414

www.deq.utah.gov

Printed on 100% recycled paper

APPROVAL OF MINUTES

**OPERATOR CERTIFICATION
COUNCIL APPTS**

FUNDING REQUESTS

RULEMAKING

OTHER BUSINESS



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

Water Quality Board
Paula Doughty, *Chair*
Steve P. Simpson, *Vice-Chair*
Myron E. Bateman
Clyde L. Bunker
Merritt K. Frey
Darrell H. Mensel
Leland J. Myers
Neal L. Peacock
Gregory L. Rowley
Amanda Smith
Daniel C. Snarr
Jeffery L. Tucker
Walter L. Baker
Executive Secretary

MINUTES

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY

UTAH WATER QUALITY BOARD

DEQ Building Board Room #1015

195 North 1950 West

Salt Lake City, Utah 84116

Wednesday, December 5, 2011

UTAH WATER QUALITY BOARD MEMBERS PRESENT

Clyde Bunker	Merritt Frey	Neal Peacock
Leland Myers	Darrell Mensel	Greg Rowley
Paula Doughty	Dan Snarr	
Steven Simpson (Called into the mtg)		

Absent: Amanda Smith, Jeffery Tucker and Myron Bateman

DIVISION OF WATER QUALITY STAFF MEMBERS PRESENT

Walt Baker, Faye Bell, John Whitehead, Ed Macauley, Leah Ann Lamb, Beth Wondimu, John Cook, Emily Cantón, Carl Adams, Dave Wham

OTHERS PRESENT

<u>Name</u>	<u>Organization Representing</u>
Dave Echols	Private Citizen
Shelly Echols	Private Citizen
Eric Johnson	Bond Counsel
Bob Allen	MAG
Chip Shortreed	Ticaboo
Nick Croxten	Ticaboo
Richard Nielson	Utah County
Rick J. Cox	URS
Karen Nichols	HDR
Andrew Jackson	MAG
Ray Loveless	UDAF
Rob Dubrc	WRA
Mike Kohler	Wasatch County
Scott Wright	HVSSD
Dave Phillips	HVSSD
Brad Rasmussen	Aqua Engineering
Wes Johnson	Horrocks Engineering

Chair Doughty called the Board meeting to order at 9:10 a.m. and invited the members of the audience to introduce themselves.

APPROVAL OF MINUTES OF THE OCTOBER 26, 2011 MEETING

Motion: It was moved by Mr. Rowley and seconded by Mr. Bunker to approve the minutes of the October 26, 2011. The motion was unanimously approved.

Executive Secretary's Report: Mr. Baker told the Board that a Kaizen workgroup was formed to offer recommendation on the make-up and duties of all DEQ boards. Following 3 days of discussion they recommended all Boards in DEQ should have 9 members. The Water Quality Board currently has 13 members. A statute will be developed with minimum qualifications and standards for people selected to serve on the Boards. Many of the other Boards have an Administrative law judge. Water Quality does not need adjudication. The primary change to set policy and do investigations will not change much. The term "Executive Secretary" will no longer exist and will be instead termed as being issued by Division Director. The transition from 13 members on the WQ Board will gradually transition to 9 members as terms of existing members end. The new members will consist of 1 Executive Director of DEQ, or Director Designee (same), 1 subject matter expert, 2 Positions represent Government, 1 Industrial, 2 public and Non Government officials, and 1 Utah licensed attorney.

FUNDING REQUEST

Financial Assistance Status Report – Ms. Cantón updated the Board on the "Summary of Assistance Program Funds," as outlined on page 2.1.

Approval to take FFY2012 IUP & PPL to public comment – Ms. Cantón explained to the Board as a condition of CWSRF funding, the U.S. EPA requires that the State of Utah provide an annual IUP and PPL. Due to the dynamic nature of wastewater projects, these documents will be updated on an ongoing basis throughout the fiscal year. The Division of Water Quality is requesting approval from the Board to receive public comment regarding the FFY 2012 Intended Use Plan (IUP) and Project Priority List (PPL).

Motion: It was moved by Mr. Myers to authorize taking the FFY2012 IUP & PPL to public comment. The motion was seconded by Mr. Peacock and was unanimously approved.

Ticaboo Special Service District #1 Authorization: Ms. Wondimu introduced Chip Shortreed and Nick Croxten from Ticaboo Electric Improvement District (EID). Ticaboo EID is requesting to borrow funds to repay Ticaboo SSD's loan to the Board, to allow it to assume Ticaboo SSD assets and dissolve Ticaboo SSD.

Motion: It was moved by Mr. Myer to approved Ticaboo EID's request for a loan in the amount of \$192,000 to repay Ticaboo SSD's loan to the Board and assume Ticaboo SSD's assets, subject to special conditions. The motion was seconded by Ms. Frey and was unanimously approved.

Introduction for Water Quality Management Plan/208 Revision for Utah and Wasatch Counties: Mr. Wham introduced Andrew Jackson with Mountainland Association of Governments (MAG) and Ray Loveless with Utah Department of Agriculture and Food (UDAF) and Richard Nielson from Utah County Public Works. MAG requested a Hardship Grant in the amount of \$790,000 to update the 208 Water Quality Management Plan for Wasatch and Utah Counties. Mr. Myers questioned if the Board is going to

fund all the project and who will pay for future development and what are the repercussions if the Board does nothing. Mr. Simpson requested holding a work meeting to discuss this matter further. Ms. Frey explained this is a component of Section 208 of the Clean Water Act and in the 1970s was necessary to receive funding from EPA. This included a 100% grant funds to develop the plans and for the states to be eligible for federal wastewater construction grant (75% grant) and SRF loan funds. It was agreed to put this request on hold and have a work meeting the morning of January 25th followed by the board meeting in the afternoon.

Heber Valley Request for Planning Advance: Mr. Cook introduced Mayor David Phillips and Scott Wright from Heber City and Brad Rasmussen with Aqua Engineering. Heber Valley Special Services District (HVSSD) requested a nonpoint source grant in the amount of \$136,000 to conduct a groundwater study to assess the potential for phosphorus movement from Rapid Infiltration Basins (RIBs) to the Provo River.

Motion: **It was moved by Mr. Peacock to authorize a \$68,000 grant and a \$68,000 Planning Advance to Heber Valley SSD to conduct a ground water study. The motion was seconded by Mr. Myers and was unanimously approved.**

OTHER BUSINESS:

Planning discussion for 2012 work meetings: Mr. Baker asked for suggestions of topics needing to be discussed during future work meetings. A number of suggestions were offered.

**-Next Meeting –
January 25, 2012
DEQ Building Board Room #1015
195 North 1950 West
Salt Lake City, Utah 84116**

Paula Doughty, Chairperson
Utah Water Quality Board



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

MEMORANDUM

TO: Utah Water Quality Board

THROUGH: Walter L. Baker, P.E.
Executive Secretary

FROM: Judy Etherington
Wastewater Certification Program Coordinator

DATE: January 17, 2012

SUBJECT: Recommendations for Appointments to the 2012 Wastewater Operator Certification Council

As of January 1, 2012, the terms of service for two members of the Wastewater Operator Certification Council have expired. Those with expired terms are Terral Dunn, representing wastewater operators; and Paul Fulgham, representing collection system operators (shown as "vacant" on the following table).

By administrative rule the make-up of the eight-member Council is as follows:

Wastewater operator (1)	Dan James
Wastewater operator (2)	<i>Vacant</i>
Wastewater collection operator (3)	<i>Vacant</i>
Municipal wastewater management	James Faulkner
Civil or environmental engineering faculty member of a university in Utah	Dr. Ramesh Goel
Senior environmental engineer in the Division of Water Quality (non-voting)	Ed Macauley, P.E.
Private sector	Rex Ausburn, P.E.
Vocational training	Dr. James Callison

Recommendations to fill these vacancies were solicited from the Utah League of Cities and Towns; four universities in Utah; the Association of Special Service Districts; the Water Environment Association of Utah (WEAU); the Rural Water Association of Utah (RWAU); and the Professional Wastewater Operator's Division (PWOD) of WEAU. Council members may be reappointed.

2.1

WWOCC 2012 Appointment Recommendation Memo

January 17, 2012

Page 2

Upon consideration of the recommendations submitted by those entities, we recommend that *Clifton Specht* be appointed to fill the vacancy representing wastewater collection operators. Clifton currently works as collection system manager with North Davis Sewer District, and has over 35 years of experience in wastewater operation. We also recommend that *Terral Dunn* be reappointed to the other position representing "wastewater operators." The terms would begin February 1, 2012 and continue through January 31, 2015.

Additionally, we would like to recommend that the appointments of the remaining council members be extended through January 31st following their current term expiration due to our tradition of conducting the business for appointment of new council members during the January meeting of the Water Quality Board.

F:\OPCERT\WWOCCOUNCIL\APPOINTMENTS\2012\WQBAPPTRECMEMO2012.DOC
FILE: CERTIFICATION COUNCIL APPOINTMENTS 2012

Loan Funds Financial Projections

	3rd Qtr FY 2012	4th Qtr FY 2012	1st Qtr FY 2013	2nd Qtr FY 2013	3rd Qtr FY 2013	4th Qtr FY 2013
STATE REVOLVING LOAN FUND (SRF)	Jan - Mar 2012	Apr - June 2012	July - Sept 2012	Oct - Dec 2012	Jan - Mar 2013	Apr - June 2013
Funds Available						
SRF - 1st Round (LOC) 2011 Cap Grant	\$ 278,997	\$ -	\$ -	\$ -	\$ -	\$ -
SRF - 1st Round (LOC) 2012 Cap Grant	\$ -	\$ 7,000,000	\$ -	\$ -	\$ -	\$ -
State Match	\$ 152,402	\$ -	\$ -	\$ -	\$ -	\$ -
SRF - 2nd Round	\$ 36,614,673	\$ 17,874,139	\$ 28,832,362	\$ 30,874,672	\$ 33,074,370	\$ 35,510,315
Interest Earnings at 0.6%	\$ 56,478	\$ 27,571	\$ 44,474	\$ 47,624	\$ 51,017	\$ 54,775
Loan Repayments	\$ 3,348,989	\$ 3,930,653	\$ 1,997,837	\$ 2,152,073	\$ 5,609,928	\$ 3,039,588
Total Funds Available	\$ 40,451,539	\$ 28,832,362	\$ 30,874,672	\$ 33,074,370	\$ 38,735,315	\$ 38,604,677
Project Obligations						
Elwood Town - Principle Forgiveness	\$ (1,381,400)	\$ -	\$ -	\$ -	\$ -	\$ -
Kearns Improvement District 2011	\$ (6,555,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Mona - Principle Forgiveness	\$ (700,000)	\$ -	\$ -	\$ -	\$ -	\$ -
South Valley WRF - NonPoint Source	\$ (805,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Loan Authorizations						
*Coalville	\$ -	\$ -	\$ -	\$ -	\$ (3,225,000)	\$ -
Granger-Hunter Improvement District	\$ (6,202,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Santaquin City	\$ (6,934,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Projects in Planning						
Long Valley Town	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Obligations	\$ (22,577,400)	\$ -	\$ -	\$ -	\$ (3,225,000)	\$ -
SRF Unobligated Funds	\$ 17,874,139	\$ 28,832,362	\$ 30,874,672	\$ 33,074,370	\$ 35,510,315	\$ 38,604,677

UTAH WASTEWATER LOAN FUND (UWLF)

Funds Available						
UWLF	\$ 4,889,989	\$ 1,543,312	\$ 1,747,362	\$ 2,724,187	\$ 3,554,112	\$ 5,121,117
Sales Tax Revenue	\$ 849,845	\$ -	\$ 896,875	\$ 896,875	\$ 896,875	\$ 896,875
Loan Repayments	\$ 999,830	\$ 731,000	\$ 406,900	\$ 260,000	\$ 997,080	\$ 796,393
Total Funds Available	\$ 6,739,664	\$ 2,274,312	\$ 3,051,137	\$ 3,881,062	\$ 5,448,067	\$ 6,814,386
General Obligations						
State Match Transfer	\$ (152,402)	\$ -	\$ -	\$ -	\$ -	\$ -
DWQ Administrative Expenses (TMDL, etc.)	\$ (326,950)	\$ (326,950)	\$ (326,950)	\$ (326,950)	\$ (326,950)	\$ (326,950)
Project Obligations						
None at this time	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Loan Authorizations						
Ephraim City	\$ (2,091,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Murray City	\$ (2,626,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Projects in Planning						
Green River	\$ -	\$ (200,000)	\$ -	\$ -	\$ -	\$ -
Total Obligations	\$ (5,196,352)	\$ (526,950)	\$ (326,950)	\$ (326,950)	\$ (326,950)	\$ (326,950)
UWLF Unobligated Funds	\$ 1,543,312	\$ 1,747,362	\$ 2,724,187	\$ 3,554,112	\$ 5,121,117	\$ 6,487,436

3.1

*Projects being presented to the WQB

Date Printed: 1/17/2012

Hardship Grant Funds Financial Projections

	3rd Qtr FY 2012	4th Qtr FY 2012	1st Qtr FY 2013	2nd Qtr FY 2013	3rd Qtr FY 2013	4th Qtr FY 2013
HARDSHIP GRANT FUNDS (HGF)	Jan - Mar 2012	Apr - June 2012	July - Sept 2012	Oct - Dec 2012	Jan - Mar 2013	Apr - June 2013
Funds Available						
Beginning Balance	\$ 12,128,849	\$ 4,487,533	\$ 4,682,612	\$ 4,274,734	\$ 4,375,504	\$ (21,090)
Interest Earnings at 0.6%	\$ 18,709	\$ 6,922	\$ 7,223	\$ 6,594	\$ 6,749	\$ -
UWLP Interest Earnings at 0.6%	\$ 7,543	\$ 2,381	\$ 2,695	\$ 4,202	\$ 5,482	\$ 7,899
Hardship Grant Assessments	\$ 728,136	\$ 980,924	\$ 504,251	\$ 86,130	\$ 662,870	\$ 1,052,481
Interest Payments	\$ 185,637	\$ 266,852	\$ 77,952	\$ 3,845	\$ 165,304	\$ 269,934
Hardship Advance Repayments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<i>Total Funds Available</i>	\$ 13,068,873	\$ 5,744,612	\$ 5,274,734	\$ 4,375,504	\$ 5,215,910	\$ 1,309,224
Project Obligations						
Big Water (cost share CIB) - Construction Grant	\$ (1,166,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Blanding City - Planning Adv.	\$ (39,900)	\$ -	\$ -	\$ -	\$ -	\$ -
Coalville - Planning Adv.	\$ (25,000)	\$ -	\$ -	\$ -	\$ -	\$ -
*Coalville - Construction Grant	\$ -	\$ (1,062,000)	\$ -	\$ -	\$ (5,237,000)	\$ -
Duchesne County - Hancock Cove	\$ (22,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Elwood Town - Construction Grant	\$ (750,600)	\$ -	\$ -	\$ -	\$ -	\$ -
Green River - Planning Adv.	\$ (23,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Heber Valley - Planning Adv.	\$ (68,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Long Valley - Planning Advance	\$ (27,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Mona City - Construction Grant	\$ (700,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Perry/Willard WWTP - Construction Grant	\$ (373,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Projects in Planning						
None at this time	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-Point Source Obligations						
DEQ - Economic Study of Nutrient Removal	\$ (313,586)	\$ -	\$ -	\$ -	\$ -	\$ -
DEQ - Nutrient Reduction Benefit Study	\$ (75,115)	\$ -	\$ -	\$ -	\$ -	\$ -
DEQ - Willard Spur Study	\$ (1,287,774)	\$ -	\$ -	\$ -	\$ -	\$ -
Division of Wildlife Resources - Strawberry	\$ (19,853)	\$ -	\$ -	\$ -	\$ -	\$ -
Division of Wildlife Resources - Sevier River	\$ (26,349)	\$ -	\$ -	\$ -	\$ -	\$ -
Jordan Valley WCD	\$ (150,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Snyderville Basin	\$ (14,896)	\$ -	\$ -	\$ -	\$ -	\$ -
Twelve Mile Canyon	\$ (727,400)	\$ -	\$ -	\$ -	\$ -	\$ -
UACD	\$ (100,000)	\$ -	\$ -	\$ -	\$ -	\$ -
UDAF	\$ (1,000,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Utah Farm Bureau	\$ (100,000)	\$ -	\$ -	\$ -	\$ -	\$ -
FY 2009 - Remaining Payments	\$ (113,646)	\$ -	\$ -	\$ -	\$ -	\$ -
FY 2010 - Remaining Payments	\$ (278,808)	\$ -	\$ -	\$ -	\$ -	\$ -
FY 2011 - Remaining Payments	\$ (324,108)	\$ -	\$ -	\$ -	\$ -	\$ -
FY 2012 - Remaining Payments	\$ (855,303)	\$ -	\$ -	\$ -	\$ -	\$ -
FY 2013 Allocation	\$ -	\$ -	\$ (1,000,000)	\$ -	\$ -	\$ -
Non-Point Source Projects in Planning						
None at this time	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<i>Total Obligations</i>	\$ (8,581,340)	\$ (1,062,000)	\$ (1,000,000)	\$ -	\$ (5,237,000)	\$ -
HGF Unobligated Funds	\$ 4,487,533	\$ 4,682,612	\$ 4,274,734	\$ 4,375,504	\$ (21,090)	\$ 1,309,224

3.2

*Projects being presented to the WQB

Date Printed: 1/17/2012

*WQB
LW
BTH*



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

MEMORANDUM

TO: Utah Water Quality Board

THROUGH: Walter L. Baker, P.E.
Executive Secretary

FROM: Lisa Nelson *LN* *EBK*
Environmental Engineer

DATE: January 25, 2012

SUBJECT: Coalville City Request for Full Financing of Wastewater Treatment Facility

On April 6, 2011 the Water Quality Board (the Board) authorized Coalville City partial financing for a new wastewater treatment facility to replace its existing aged plant located on US Bureau of Reclamation (USBR) land subject to a non-renewable lease expiring October 2014. The replacement facility project was estimated to cost \$9,484,000, and the Board authorized one-half of that amount in the form of a \$3,092,000 grant and a \$1,650,000 loan repayable over 20 years at 0% interest, with the expectation that Coalville City would pursue the balance of the funding through USDA Rural Development. The Board also authorized a \$25,000 advance to complete a funding application package to USDA to apply for the balance of the funding for this project.

Since that time Coalville actively pursued funding from USDA. At a meeting with Coalville, Water Quality staff, and USDA on November 29, 2011, USDA explained that Coalville is eligible for the balance of the funding in the form of a \$2,972,000 grant and a \$1,770,000 loan repayable over 40 years at 3.0% interest. In a telephone conference call on January 9, 2012 with USDA and Water Quality staff, it was explained the while Coalville was ranked #3 on USDA's priority list, USDA's appropriation for this fiscal year was not enough to entirely fund the project ranked #1. There is a strong probability that funds will not be available from USDA for this project when it is time to go to construction.

Newly discovered project challenges include a requirement by SHPO to have an archaeologist onsite during construction excavation activities (increases the cost of the project by \$40,000) and the requirement by USDA to provide documentation that the new facility will not reside in a 500-yr Flood Plain. The 500-yr Flood Plain map does not exist so it is difficult to document to USDA that the site is not within the Flood Plain. USDA is checking to see if a variance to the 500-yr Flood Plain requirement is possible or if spillway data on Echo Dam from the USBR would be

3.3

195 North 1950 West • Salt Lake City, UT
Mailing Address: P.O. Box 144870 • Salt Lake City, UT 84114-4870
Telephone (801) 536-4300 • Fax (801) 536-4301 • T.D.D. (801) 536-4414

www.deq.utah.gov

Printed on 100% recycled paper

acceptable as documentation. The Division of Water Quality requires a facility to be protected from physical damage caused by a 100-yr event. The current facility site is at an elevation of 5566-ft and the proposed new site is at 5570-ft.

The new wastewater treatment facility will continue to discharge to Echo Reservoir, an important water source for Weber, Morgan, and Davis Counties. Echo Reservoir is on Utah's 303(d) list of impaired water bodies based on low dissolved oxygen and high total phosphorus. A TMDL study submitted to USEPA in 2006 was not approved in part due to insufficient load reductions, so a new watershed wide effort that will include Echo Reservoir, Rockport Reservoir, and tributaries is underway, and is expected to result in load allocations that are similar to or lower than those proposed in the 2006 TMDL.

Coalville City has negotiated an agreement with JUB Engineering to design a conventional activated sludge treatment plant with nutrient removal capability. It is estimated the design process will take approximately one year to complete. Although the TMDL does not list nitrogen as a parameter of concern, the Division of Water Quality has expressed concern regarding nitrogen, and JUB Engineering is recommending a design will utilize a Modified Ludzack Ettinger (MLE) process chosen for its efficiency and effectiveness in removing nitrogen. The process will have two parallel process trains consisting of concrete tanks, mixers, fine bubble aeration, secondary clarifiers, and intermediate and return sludge pumping with effluent targets of total nitrogen <10 mg/l and total phosphorus <1 mg/l. Effluent phosphorus limits will be met using chemical phosphorus removal. The design will include provisions that will allow the facility to be upgraded, if necessary, to meet future effluent limits of total nitrogen <3 mg/l and total phosphorus <0.1 mg/l. Nitrogen limits would be achieved using a second stage anoxic zone with an external carbon source, while phosphorus limits would be achieved using tertiary filtration with additional chemical dosing.

This project is currently ranked #1 on the WQB Project Priority List, and it is critical that Coalville City stick to the project schedule to avoid becoming a squatter on USBR land discharging to such an important drinking water source. The City has now completed planning and negotiated for the purchase of a suitable property, subject to obtaining financing. As required by the Board the City applied for USDA funding, but was not appropriated funds this year, and it is unlikely that funds will be forthcoming in the next appropriation.

Therefore, Coalville City is requesting a design advance in the amount of \$762,000 to execute a design contract and \$300,000 to execute a land purchase contract, along with full project funding in the amount of \$9,524,000, subject to the condition that should project funding be obtained from USDA, it would replace Board funding in such a manner as to maintain an equivalent repayment amount by the City over the life of the Board's loan.

Coalville City is requesting project funding in the form of a \$6,299,000 construction grant and a \$3,225,000 loan repayable over 20 years at an interest rate of 0.0%, and a design advance in the amount of \$1,062,000. (These financing terms were determined using the same repayment amounts as if the USDA funding had been secured.)

Staff recommends that the Board authorize the funding package and design advance as stated with the following special conditions:

1. Coalville City must continue to aggressively pursue funding through USDA Rural Development.
2. Any funds provided to Coalville City for this project by USDA Rural Development will reduce the Board's obligation by a commensurate amount, and in such a form as to maintain an equivalent repayment amount by the City over the life of the Board's loan.
3. This funding request replaces the construction funding authorized by the Water Quality Board on April 6, 2011.

Coalville Wastewater Treatment Facility Improvement Project

Project Costs	
Legal and Bonding	\$ 28,000
Engineering - Design	\$ 762,000
Engineering - CMS	\$ 672,000
Property and Easements	\$ 350,000
Construction	\$ 6,410,000
Contingency (~15%)	\$ 975,000
Loan Origination Fee	\$ 33,000
Repay Planning Advance	\$ 100,000
Refinance 2001 Bond	\$ 194,000
Total Project Cost:	\$ 9,524,000

Project Funding	
Local Contribution	
WQB Grant Amount	\$ 6,299,000
WQB Loan Amount:	\$ 3,225,000
Total Project Funding:	\$ 9,524,000

ESTIMATED COST OF SEWER SERVICE

WQB Loan Amount	WQB Loan Interest Rate	WQB Loan Debt Service	WQB Loan Reserve	Existing Debt Service	Total Annual Sewer O&M Cost	Total Annual Sewer Cost	Annual Revenue from User Charges	Cost/ERU in Monthly Sewer Fees	Sewer Cost as a percent of MAGI
\$3,225,000	0.00%	\$161,250	\$40,313	\$0	\$194,000	\$395,563	\$260,352	\$48.62	1.48%
\$3,225,000	1.00%	\$178,714	\$44,679	\$0	\$194,000	\$417,393	\$260,352	\$51.30	1.57%
\$3,225,000	1.50%	\$187,842	\$46,961	\$0	\$194,000	\$428,803	\$260,352	\$52.70	1.61%
\$3,225,000	2.00%	\$197,230	\$49,308	\$0	\$194,000	\$440,538	\$260,352	\$54.15	1.65%
\$3,225,000	2.30%	\$202,986	\$50,747	\$0	\$194,000	\$447,733	\$260,352	\$55.03	1.68%
\$3,225,000	2.50%	\$206,874	\$51,719	\$0	\$194,000	\$452,593	\$260,352	\$55.63	1.70%
\$3,225,000	3.00%	\$216,771	\$54,193	\$0	\$194,000	\$464,963	\$260,352	\$57.15	1.75%
\$3,225,000	3.50%	\$226,914	\$56,729	\$0	\$194,000	\$477,643	\$260,352	\$58.71	1.79%
\$3,225,000	4.00%	\$237,301	\$59,325	\$0	\$194,000	\$490,626	\$260,352	\$60.30	1.84%
\$3,225,000	4.50%	\$247,926	\$61,981	\$0	\$194,000	\$503,907	\$260,352	\$61.94	1.89%
\$3,225,000	5.00%	\$258,782	\$64,696	\$0	\$194,000	\$517,478	\$260,352	\$63.60	1.94%

Current Customer Base & User Charges	
Total Customers (ERU):	678
Average MAGI for Coalville (2009)	\$ 39,300
Average Impact& Connection Fee (per ERU):	\$ 3,331
Current Monthly User Fee (per ERU):	\$ 32.00
User Fee 1.4% MAGI	\$ 45.94

Funding Conditions	
Loan Repayment Term (years):	20
Reserve Funding Period:	6

Total O&M expenses Treatment & Collection	\$ 194,000
Existing Debt Service	\$ -

Proposed Financing		WQBRD
Local Contribution	\$ -	-
WQB Loan	\$ 3,225,000	1,651,000
WQB Grant	\$ 6,299,000	3,131,000
USDA Loan	\$ -	1,770,000
USDA Grant	\$ -	2,972,000
Project Cost	\$ 9,524,000	9,524,000

Projected Annual Sewer Expenses

Annual Operating Expense (O&M):	\$ 194,000
Water Quality Board Loan (0.0%, 20 yrs)	\$ 161,250
USDA Loan Payment (3%, 38 yrs)	\$ -
Existing Debt Service:	\$ -
Total Annual Cost:	\$ 355,250

Projected Sewer Revenue Sources

Beginning Cash	\$ -
2012 Customers (ERU)	678
50% Projected Growth thru 2020	0.73%
50% Projected Growth 2021-2030	1.24%
Sewer Impact Fee	\$ 3,331
Max Monthly User Fee @ 1.4% x \$39,300	\$ 45.85
Current Monthly User Fee	\$ 36.00

Sewer Revenue Projections

Year	Growth Rate (%)	Annual (ERU)	Total Users	User Charge Revenue	Impact Fee Revenue	Total Revenue	WQB Loan Payment	WQB Loan Reserves	WQB Remaining Principal	WQB Interest Payment	USDA Loan Payment	Existing Sewer Debt Service	O&M Expenses	Total Expenses	Beginning Cash	Ending Cash Flow	Net Revenue	Debt Service Ratio
2013	0.7%	5	683	327,840	16,655	344,495			3,225,000	-		21,000	260,000	281,000	63,495	63,495	63,495	1.26
2014	0.7%	5	688	330,240	16,655	346,895			3,225,000	-		-	260,000	260,000	63,495	150,390	86,895	1.28
2015	0.7%	5	693	381,289	16,655	397,944		40,313	3,063,750	-	-	-	194,000	395,563	150,390	152,771	2,381	1.30
2016	0.7%	5	698	384,040	16,655	400,695		40,313	2,902,500	-	-	-	194,000	395,563	152,771	157,903	5,132	1.32
2017	0.7%	5	703	386,791	16,655	403,446		40,313	2,741,250	-	-	-	194,000	395,563	157,903	165,786	7,883	1.33
2018	0.7%	5	708	389,542	16,655	406,197		40,313	2,580,000	-	-	-	194,000	395,563	165,786	176,420	10,634	1.35
2019	0.7%	5	713	392,293	16,655	408,948		40,313	2,418,750	-	-	-	194,000	395,563	176,420	189,806	13,385	1.37
2020	0.7%	5	718	395,044	16,655	411,699		40,313	2,257,500	-	-	-	194,000	395,563	205,942	205,942	16,136	1.38
2021	0.7%	5	723	397,795	16,655	414,450		40,313	2,096,250	-	-	-	194,000	395,563	265,141	327,092	61,951	1.40
2022	0.7%	5	728	400,546	16,655	417,201		40,313	1,935,000	-	-	-	194,000	395,563	327,092	391,793	82,977	1.51
2023	0.7%	5	733	403,297	16,655	419,952		40,313	1,773,750	-	-	-	194,000	395,563	391,793	474,771	87,929	1.58
2024	1.2%	9	742	408,248	29,979	438,227		40,313	1,612,500	-	-	-	194,000	395,563	474,771	562,700	92,881	1.61
2025	1.2%	9	751	413,200	29,979	443,179		40,313	1,451,250	-	-	-	194,000	395,563	562,700	655,581	97,833	1.66
2026	1.2%	9	760	418,152	29,979	448,131		40,313	1,290,000	-	-	-	194,000	395,563	655,581	753,414	106,666	1.70
2027	1.2%	9	769	423,104	29,979	453,083		40,313	1,128,750	-	-	-	194,000	395,563	753,414	860,080	112,168	1.73
2028	1.2%	10	779	428,066	33,310	461,916		40,313	967,500	-	-	-	194,000	395,563	860,080	972,247	117,670	1.76
2029	1.2%	10	789	434,108	33,310	467,418		40,313	806,250	-	-	-	194,000	395,563	972,247	1,089,917	123,172	1.80
2030	1.2%	10	799	439,610	33,310	472,920		40,313	645,000	-	-	-	194,000	395,563	1,089,917	1,213,089	128,674	1.83
2031	1.2%	10	809	445,112	33,310	478,422		40,313	483,750	-	-	-	194,000	395,563	1,213,089	1,341,763	134,176	1.87
2032	1.2%	10	819	450,614	33,310	483,924		40,313	322,500	-	-	-	194,000	395,563	1,341,763	1,475,939	139,678	
2033	1.2%	10	829	456,116	33,310	489,426		40,313	161,250	-	-	-	194,000	395,563	1,475,939	1,615,616		
2034	1.2%	10	839	461,618	33,310	494,928		40,313	-	-	-	-	194,000	395,563	1,615,616			

Project Number: _____
Date Received: January 25, 2011
Date to be presented to the WQB: April 6, 2011

WATER QUALITY BOARD
REQUEST FOR HARDSHIP GRANT FUND RESERVE
AUTHORIZATION

FILE COPY

APPLICANT:	Coalville City 10 North Main PO Box 188 Coalville, Utah 84017 Telephone: 435-336-5981
PRESIDING OFFICIAL/CONTACT:	Mayor Duane Schmidt 10 North Main PO Box 188 Coalville, Utah 84017 Telephone: 435-336-5981
TREASURER:	Chantel Pace, City Recorder 10 North Main PO Box 188 Coalville, Utah 84017 Telephone: 435-336-5981
CONSULTING ENGINEER:	Trevor Lindley, Project Engineer J-U-B Engineers Inc. 466 North 900 West Kaysville, Utah 84037 Telephone: 801-544-0393
CITY ATTORNEY:	Sheldon Smith, Sheldon Smith & Associates PO Box 972 Coalville, Utah 84017 Telephone: 435-336-1200
BOND COUNSEL:	Eric Todd Johnson Blaisdell and Church P.C. 5995 S. Redwood Rd. Taylorsville, UT 84123 Telephone: 801-521-7620

APPLICANT'S REQUEST:

Coalville City is requesting financial assistance in the amount of a \$6,834,000 grant and \$2,650,000 loan at an interest rate of 0.0% repayable over 20 years for the construction of a new wastewater treatment facility to replace the existing facility that must be abandoned. Coalville City is also requesting an additional Planning Advance of \$25,000 to fund the work required to prepare a Rural Development funding application package, which requires the environmental work to be completed at the time of application.

APPLICANT'S LOCATION



PROJECT NEED

Coalville City's aged wastewater treatment facility currently resides on property leased from the United States Bureau of Reclamation (BOR) under a 50 year lease agreement set to expire in October 2014. The BOR is unwilling to extend the lease under terms that Coalville considers reasonable, forcing the City to relocate its wastewater treatment facilities in their entirety.

UPDATES SINCE THE INTRODUCTION ON FEBRUARY 23, 2011

Walt Baker will meet with Curtis Pledger of the Bureau of Reclamation on March 23rd at Coalville City to discuss what options are available that will allow the City to maintain the treatment plant at the existing site.

UPDATES SINCE THE HARDSHIP PLANNING ADVANCE ON JUNE 20, 2008

On June 20, 2008, the City of Coalville came to the Water Quality Board for a planning advance to help cover the costs associated with conducting a land transfer with BOR. As stated earlier, the wastewater treatment plant for the City of Coalville resides on land that is owned by the BOR and was leased back on a 50 year lease that comes due October 2014.

The City was under the early impression (based on Facility Planning funded by the City and conducted in 2006-2007) that the BOR was quite amenable to this transfer and all of the early meetings seemed to confirm this. From July 2008 until September 2009 the City and JUB and BOR staff were working towards this property transfer and working on all the required documents, one being the Emergency Response Plan. However, when the BOR Area Manager became involved in September 2009, the process began to stall.

The Area Manager of the BOR became adamant that an extensive berm surrounding the treatment facility would be required as part of the Emergency Response Plan prior to any sale or renewal of a lease. Design criteria described by the BOR required that the top of the berm match the crest of the dam; the berm have a keyway trench in the bottom extending approximately 5 feet below the native ground with an impervious material to block potential contamination; the berm be reinforced on the reservoir side in order to prevent erosion; and the berm have a crest width of approximately 10 feet with sides slopes of 1:1.

This would result in a berm surrounding the treatment plant approximately 7 feet higher than the treatment plant floor and 10 or more feet high above the nearby floor of the reservoir (immediately outside the lease area limits of the treatment plant). This is nearly five times greater than that necessary to contain emergency wastewater overflows. The BOR felt this could easily be accomplished for \$75,000. However, JUB's estimate was more in line with \$550,000. In addition the BOR has no interest in selling or leasing any additional land which would dramatically reduce treatment options for the City at the existing site.

The City and JUB and DWQ attended a meeting with Brad Shafer, Senior Advisor in Senator Bennett's office, to discuss these problems with BOR and the precarious situation it was putting the City in. Mr. Shafer called the BOR to intervene on the City's behalf and expressed his concerns, to no avail. The criticality of the schedule was discussed and the possibility of receiving 595 appropriations funding was broached.

The City has received a letter from BOR dated May 10, 2010 stating that if they found the BOR response to the City's request not to construct a berm unacceptable then "we encourage you to pursue constructing a new facility on non-federal lands" (copy of Letter in Appendix B). At this point the City isn't left with many options and has aggressively begun the process of trying to fund and construct a new facility within a very short and strict timeline.

Since that time, the City was awarded the 595 grant in the amount of \$5,000,000 (see copy of Signed Agreement in Appendix E). However, the 595 grant was withdrawn in December (see copy of Program

Manager Letter in Appendix D).

The City's wastewater treatment facility is an award winning facility that, despite the aging infrastructure, has consistently discharged high quality effluent to Chalk Creek. Chalk Creek drains into Echo Reservoir that has a state beneficial use classification that includes culinary water. This facility has been permitted since the 1970's and has never violated its UPDES permit, which is a major accomplishment.

PROJECT DESCRIPTION:

The preferred alternative, given the situation as it stands, is to construct a new wastewater treatment plant on non-federal lands located slightly south of the existing plant. The treatment plant technology selected is a conventional activated sludge plant with biological nutrient removal, site master planning for tertiary filtration, and residuals holding and dewatering at the site. The project also includes repair and upgrade of an existing lift station. The City plans on maintaining the same discharge point which is made possible by the City's long-term agreement with the historic rail trail and the easements that have been negotiated.

POSITION ON PROJECT PRIORITY LIST:

Coalville is currently ranked 2nd of 25 on the Project Priority List.

POPULATION

Source Governor's Office of Planning and Budget 2008 estimates:

Population and Connection Projections

Year	Residents	Total Sewer ERUs¹
2010	1,591	734
2020	1,944	834
2030	2,417	1,002

¹ Includes residential and non-residential ERU's

CURRENT USER CHARGE:

Coalville recently revised their sewer ordinance to raise sewer rates from \$28 to \$32 for a typical residence, and they also implemented an automatic increase to \$36/month in January 2012 and \$40/month in January 2013. The current rates are:

Residential \$32.00 per month
Commercial: \$32.00 per month plus \$2.29 per 1,000 gallons over 8,500 gallons
RV Parks: \$12.00 per space, plus usage at \$2.29 per 1,000 gallon
Impact Fee: \$3,330.57

IMPLEMENTATION SCHEDULE:

Introduction to WQB for Funding:	February 23, 2011
WQB Funding Authorization:	April 6, 2011
Final Public Hearings:	May 2011
Advertise EA (FONSI):	June 2011
Facility Plan Approval:	July 2011
Commence Design:	October 2011
Issue Construction Permit:	July 2012
Advertise for Bids:	August 2012
Bid Opening:	October 2012
Loan Closing:	November 2012
Commence Construction:	January 2013
Complete Construction:	<u>October 2014</u>

COST ESTIMATE:

Legal and Bonding	\$	28,000
DWQ Loan Origination Fee (1%)	\$	27,000
Engineering - Design	\$	684,000
Engineering - CMS	\$	684,000
Property & Easements	\$	350,000
Construction	\$	6,370,000
Contingency	\$	1,047,000
Refund 2001 Bond and DWQ Planning Advance	\$	294,000
Total	\$	9,484,000

ESTIMATED ANNUAL COST FOR SEWER SERVICE:

Operation & Maintenance - Annual	\$239,000
WQB Debt Service (0%; 20 yrs)	\$132,500
Existing Debt Service (to be refinanced)	\$0
WQB Required Reserves (1½ pmt/6 yrs)	\$33,125
Coalville City MAGI (2009)	\$39,300
Monthly Cost / ERU at 1.4% MAGI	\$45.85

STAFF COMMENTS AND RECOMMENDATION:

Staff will be meeting with Walt Baker and Curtis Pledger (Bureau of Reclamation) in Coalville on March 23, 2011. Staff Recommendations will be made at the Board meeting based on the outcome of this meeting. However, a project will likely be needed regardless of the outcome of this meeting and Staff is recommending that Coalville pursue matching funding from Rural Development as shown on the attached Cost Model. Staff recommends that the Board authorize a loan in the amount of \$1,650,000 at 0% interest

and grant in the amount of \$3,092,000 as well as an additional \$25,000 planning advance for Coalville to complete the funding application for Rural Development.

SPECIAL CONDITIONS:

1. Coalville City must agree to participate annually in the Municipal Wastewater Planning Program (MWPP).
2. As a part of the facility planning, Coalville City must complete a Water Conservation and Management Plan.
3. Coalville is responsible for securing the balance of funding needed for this project.

N:\Lcnelson\0-Projects\Coalville\Coalville Feasibility Report Grant Reserve 02-23-2011.doc
File: Coalville/Planning/Section 1



State of Utah

GARY R. HERBET
Governor

GREG BELL
Lieutenant Governor

Department of Environmental Quality

Amanda Smith
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

Water Quality Board
Paula Doughty, *Chair*
Steven P. Simpson, *Vice-Chair*
Clyde L. Bunker
Lou Ann Christensen
Merritt K. Frey
Darrell H. Mensel
Leland J. Myers
Amanda Smith
Gregory L. Rowley
Daniel C. Snarr
Jeffery L. Tucker
Phil Wright
Walter L. Baker
Executive Secretary

MEMORANDUM

TO: Water Quality Board
THROUGH: Walt Baker
FROM: Chris Bittner
DATE: January 8, 2012

SUBJECT: Proposed Change in Rule to Utah Administrative Code R317-2 *Standards of Quality for Waters of the State.*

Action Item

- Request Board adopt Utah's Water Quality Standards (R317-2) with changes and an effective date of April 1, 2012

The Board has three options:

1. Adopt the proposed change in rule with the additional revisions to be effective April 1, 2012 (staff's preferred option).
2. Adopt some of the changes and direct staff to prepare a Proposed Change in Rule for the additional revisions. Staff would return to the Board at a future meeting with recommendations.
3. Take no action or vote not to accept the proposed rule change. The proposed changes would not go into effect and staff would revise the rule to address the Board's concerns.

4.1

Background

As approved by the Board at the September meeting, staff proceeded with rulemaking for revisions to R317-2. The public comment period ended began on November 1, 2011 and ended December 15, 2011. A public hearing was held December 5, 2011. USEPA Region 8 provided the only written comments and nobody attended the public hearing. USEPA's comment letter is provided as Attachment 1. USEPA is supportive of the proposed changes but made two suggestions (see Other Comments, p. 4 Attachment 1). These comments were addressed by making minor revisions to the proposed rule (Attachment 2). Attachment 2 shows both the initially proposed changes and the new changes.

If the Board adopts the rule with the changes, staff will file the Change in Proposed Rule with the Division of Administrative Rules and the rule can be effective after a 30-day notice period. Staff proposes an effective date of April 1, 2012 which will provide adequate time to file and complete the 30-day notice period.

USEPA's first comment noted that one of the changes to the Antidegradation Categories appeared incorrect. R317-2-12.1.a. was revised in 2010 by listing Weber River from Uintah to Mountain Green as a Category 2 water in R317-2-12.2 (see p. 13 Attachment 2). Staff subsequently realized that this reach of the Weber River was listed as an exception to Category 1 because of existing treatment facilities and is in fact a Category 3 water. The intent of this rulemaking was to correct this error by reverting to the previous (pre-2010) rule language.

The revisions presented to the Board in September 2011 made this correction but introduced another error by changing the reference to R317-2-12.2 to Category 3 instead of Category 2. R317-2-12.2 is a listing of Category 2 waters. This section of the rules has previously been misinterpreted. Therefore, staff is proposing to add numbers to the exceptions as shown in Attachment 2 in addition to correcting the Category 3 back to Category 2.

The other USEPA comment was a suggestion to change the spelling of tributyl tin to tributyltin. Staff concurs with this recommendation and made the change in the proposed rule revisions.

Staff recommends that the Board adopt the proposed rules with the changes. Attachment 3 is an example of the Board order to be signed by the Board Chair if adopted.

Supporting Documents

Attachment 1: USEPA 12/14/2011 Comment Letter

Attachment 2: Markup of Change in Proposed Rule

Attachment 3: Example of Board Order to be signed if Board adopts the change

4.2



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8**

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: 8EPR-EP

12/14/11

Walt Baker, Director
Division of Water Quality
Utah Department of Environmental Quality
PO Box 144870
Salt Lake City, UT 84114-4870

Re: Proposed Revisions to R317-2

Dear Mr. Baker:

This letter provides comments of the U.S. EPA Region 8 Water Quality Unit (WQU) on the proposed revisions to R317-2 (Standards of Quality for Waters of the State). Our review addresses the proposal and supporting information included in the public notice of proposed rulemaking published in the November 1, 2011 issue of the Utah State Bulletin (Volume 2011, No. 21). The proposed revisions include modifications to Utah's antidegradation policy, authorizing language for the adoption of site-specific standards, segment specific water quality standards, and new or revised criteria for several pollutants.

Overall, the WQU supports the proposed revisions to R317-2. Our comments are summarized below. Please note that the positions described in our comments, regarding both existing and proposed water quality standards, are preliminary in nature and should not be interpreted as final decisions under CWA § 303(c). The EPA approval/disapproval decisions will be made after adoption of water quality standards revisions and submittal to the EPA, and will consider all pertinent evidence including information submitted during the rulemaking process.

PROPOSED REVISIONS TO ANTIDEGRADATION (R317-2-3)

The Utah Division of Water Quality (UDWQ) proposes several revisions to R317-2-3 including:

- A revised description of temporary and limited for Category 1 waters that references R317-2-3.5.b.4;
- The addition of a temporary and limited provision for Category 2 waters; and
- Deletion of 317-2-3.5.b.1(d).

The proposed revisions to the temporary and limited provisions as they apply to Category 1 and 2 waters are consistent with the *EPA Region 8 Guidance: Antidegradation Implementation* and meet the requirements of 40 CFR § 131.12. Therefore, we are not opposed to the adoption of the revised language.

The WQU also supports UDWQ's proposal to delete 317-2-3.5.b.1(d). Deletion of this provision will resolve the 2010 disapproval action.¹ If the proposed revisions to R317-2-3 are approved by the Utah Water Quality Board (Board), the WQU will likely recommend approval of the revisions.

PROPOSED REVISIONS TO SITE-SPECIFIC STANDARDS PROVISION (R317-2-7; TABLE 2.14.1 & 2.14.2)

The UDWQ proposes revisions to R317-2-7 that will expand the situations where a site-specific standard may be adopted. As currently written, R317-2-7 only identifies TDS and temperature for the consideration of site-specific standards. There is no reason to limit site-specific standards to these two parameters. The EPA has identified several methods for developing site-specific standards that can be used for a wide variety of pollutants.² The proposed revisions remove the parameter specificity and allow for site-specific standards under the following two conditions: 1) where site-specific data or analyses indicate that the existing criterion is more or less stringent than necessary to protect the designated use or 2) where natural, human induced unalterable conditions or other factors identified by 40 CFR 131.10(g)³ prevent attainment of the statewide criterion. Adoption of the proposed language will provide Utah the authority to develop and adopt site-specific standards with scientifically defensible methods for waterbodies where the state-wide standards are not appropriate.

PROPOSED REVISIONS TO INDIVIDUAL WATERBODIES (R317-2-12 & R317-2-13)

The UDWQ's proposal includes revisions to the antidegradation classification, use designations, and segment descriptions for several waterbodies. See Enclosure 1 for a complete list of the proposed revisions to individual waterbodies. Most of the proposed revisions are nonsubstantive changes and would not change the level of water quality protection; however, a few of the revisions upgrade and/or clarify the designated uses for water bodies that were previously unclassified (i.e., Red Butte Creek, Emigration Creek, Big East Lake, and Sand Hollow Reservoir) and other proposed revisions will upgrade the recreation use designation from 2B to 2A (i.e., Fremont and Ogden rivers) to better protect the existing recreation use. We commend the UDWQ for revising the use designations to better reflect the existing uses. Assigning correct designated uses is a necessary first step to establishing appropriate water quality standards for a particular waterbody. If adopted by the Board, these revisions will provide better protection to these aquatic resources.

PROPOSED REVISIONS TO NUMERIC CRITERIA (R317-2-14)

Table 2-14-1 - Site Specific Standards for Total Dissolved Solids

In its 2010 action letter, the EPA disapproved a revised segment description that relaxed the TDS criterion from 1,200 mg/L to 3,000 mg/L for a portion of the Price River and tributaries since no data or rationale were provided to support the application of the relaxed criterion. It is our understanding that the section of the Price River where the criterion was relaxed (from the confluence with Coal Creek to the confluence with Soldier Creek and tributaries) was accidentally excluded from the original site-specific TDS criteria proposal that was adopted by the Board. This resulted in a small segment of the

¹ EPA disapproved 317-2-3.5.b.1(d) in its action letter dated August 24, 2010.

² *Water Quality Standard Handbook: Second Edition*. EPA-823-B-94005a

³ 40 CFR 131.10(g) identifies six factors that a state may use to justify removal of a designated use that is not an existing use. Although this section of the regulation is specific to use removal, it also generally supports adoption of site-specific water quality standards based on pollutant concentrations that are feasible to attain.

Price River with the state-wide criterion of 1,200 µg/L, which was sandwiched between two segments with site-specific TDS criteria of 1,700 mg/L and 3,000 mg/L.

To address the 2010 disapproval, the UDWQ proposes to move the segment boundary where the 3,000 mg/L criterion ends and the 1,700 mg/L site-specific criterion begins upstream from the confluence with Coal Creek to the confluence with Soldier Creek. This revision to the segment description would apply the more stringent 1,700 mg/L site-specific TDS criterion up to the confluence with Soldier Creek. The WQU has reviewed the information and data provided in the total maximum daily load (TMDL) and has determined that it is reasonable to apply of the 1,700 mg/L criterion to this section of the Price River. The 1,700 mg/L criterion is an attainability-based value that accounts for the load reductions that would occur if non-point source best management practices (BMP) are implemented in the watershed. It is our understanding that no water quality data specific to this reach of the Price River are available; therefore, the WQU believes it is reasonable to revise the segment description so that the more stringent site-specific criterion is applied to this section of the Price River. If the Board were to adopt the proposed revision to the segment description, the WQU would likely recommend approval; however, as new water quality data and information on the highest attainable water quality become available and BMPs are implemented in the watershed, UDWQ should reevaluate the site-specific standards adopted for this segment and other segments in the Price River watershed to determine if the standards should be revised (as required by 40 CFR § 131.20(a)).

Table 2-14-2 Numeric Criteria for Aquatic Wildlife

UDWQ proposes the following revisions Table 2.14.2:

- Deletion of the acute mercury criterion; and
- Addition of acute and chronic criteria for tributyltin, acrolein, and chlorpyrifos.

The WQU supports the proposal to delete the existing acute mercury criterion of 2.4 µg/L, leaving only the chronic mercury criterion of 0.012 µg/L in place. The existing acute criterion is inconsistent with the existing CWA § 304(a) recommendation for mercury of 1.4 µg/L (1995 Updates; EPA-820-B-96-001). Furthermore, and more importantly, the acute criterion only accounts for aquatic life effects resulting from water column exposure. It does not reflect the importance of exposure via the food pathway and for that reason it is significantly underprotective and not a useful criterion.

The WQU commends the UDWQ for proposing to add the EPA recommended 304(a) criteria for tributyltin, acrolein, and chlorpyrifos to Utah's numeric criteria for aquatic wildlife use protection.

Table 2-14-2 List of Human Health Criteria

UDWQ proposes to update the existing acrolein and phenol human health criteria to the following:

Parameter	Existing Criteria (µg/L)		Proposed Criteria (µg/L)	
	Water & Organisms	Organisms Only	Water & Organisms	Organisms Only
Acrolein	190	290	6	9
Phenol	21,000	1,700,000	10,000	860,000

The EPA recently published updates to its acrolein and phenol water quality criteria for protection of human health (74 Fed. Reg. 27535, 27536, June 10, 2009). The EPA revised the human health water

quality criteria based on the Agency's 2000 Human Health Methodology (EPA-822-B-00-004). This methodology incorporates significant scientific advances made in the last two decades, particularly in the areas of cancer and noncancer risk assessments, exposure assessments, and methodologies to estimate bioaccumulation in fish. The updated water quality criteria integrate new reference doses for acrolein and phenol that have been added to the Agency's Integrated Risk Information System. The proposed values are also consistent with EPA's current CWA Section 304(a) criteria recommendations. The WQU supports adoption of the updated criteria.

OTHER COMMENTS

- There appears to be a typo in R317-2-12.1.a, where Category 2 is changed to Category 3. Earlier drafts of the proposed revisions included a proposal to align the numbering of Utah's antidegradation Categories with the EPA's Tiers; however, this proposal did not make it into the final proposal that was noticed for public comment. It appears that one revision was not changed back to its original number.
- The UDWQ may want to consider using "tributyltin" instead of "tributyl tin" since it is more commonly spelled without the space.

CONCLUSION

We hope these comments are helpful to the UDWQ, the Board, and the parties to this rulemaking. We appreciate the efforts of the UDWQ and the parties to address issues of concern to the EPA. If there are questions concerning our comments, please contact me at (303) 312-6947, or Lareina Guenzel at (303) 312-6610.

Sincerely,



Sandra Spence, Acting Chief
Water Quality Unit

cc: Christopher Bittner

ENCLOSURE 1

SUMMARY OF SITE-SPECIFIC REVISIONS TO ANTIDEGRADATION CLASSIFICATIONS, USE DESIGNATIONS AND SEGMENT DESCRIPTIONS

Antidegradation Classification Revisions

Regulation	Drainage	Waterbody	Rule change and Rationale
R317-2-12.1.a. & R317-2-12.2.b	Weber River	Weber River, from Uintah to Mountain Green	Correct error in previous rulemaking where antidegradation category of this section of the Weber River was the unintentionally changed
R317-2-12.2.b.6	Weber River	Calk Creek and tributaries from U.S. Highway 189 <u>Main Street in Coalville</u> to headwaters	Reassign the antidegradation category boundary for Chalk Creek to Main Street in Coalville because of highway name changes.
R317-2-12.2.b.6	Weber River	Weber River and tributaries from U.S. Highway 189 <u>Utah State Route 32</u> near Oakley to headwaters	Reassign the antidegradation category boundary for Weber River to Utah State Route 32 because of highway name changes
R317-2-12.2.b.12	Farmington Bay	Shepard Creek and tributaries from Height <u>Haight</u> Bench Canal diversion to headwaters (Davis County)	Correct typographical error
R317-2-12.2.b.12	Farmington Bay	Farmington Creek and tributaries from Height <u>Haight</u> Bench Canal diversion to headwaters (Davis County)	Correct typographical error

Use Designation and Segment Description Revisions - Rivers, Creeks and Streams

Regulation	Drainage	Waterbody	Rule change and Rationale
R317-2-13.1.a	Upper Colorado River	Fremont River and tributaries, through Capitol Reef National Park to headwaters	Upgrade designated use from 2B to 2A*
R317-2-13.1.b	Green River	Price River and tributaries, from Carbon Canal Diversion at Price City Golf Course to Price city Water Water Treatment Plant intake	Correct typographical error
R317-2-13.1.b	Green River	O-Wi-Yu-Kuts Creek and tributaries, <u>Daggett</u> County	Correct typographical error
R317-2-13.4.a	Weber River	Ogden River and tributaries, from confluence with Weber River to Pineview Dam, except as listed below	Upgrade designated use from 2B to 2A*

ENCLOSURE 1

Regulation	Drainage	Waterbody	Rule change and Rationale
R317-2-13.5.a	Utah Lake-Jordan River	Red Butte Creek and tributaries from Liberty Park pond inlet to Red Butte Reservoir	Assign beneficial uses (2B, 3A and 4) to a previously unclassified reach of Red Butte Creek
R317-2-13.5.a	Utah Lake-Jordan River	Emigration Creek and tributaries, from Foothill Boulevard 1100 East in Salt Lake City to headwaters	Extend lower segment boundary downstream to assign beneficial uses to a section of the creek not previously classified. Add beneficial use of Class 4*
R317-2-13.5.a	Utah Lake-Jordan River	Parley's Creek and tributaries, from 1300 East in Salt Lake City to Mountain Dell Reservoir to headwaters	Delete "to headwaters" because they are included in another segment with the same use designations
R317-2-13.6.a	Sevier River	Sevier River and tributaries below U.S. National forest boundary from Gunnison Bend Reservoir to Annabella Diversion except except as listed below	Correct typographical error

Use Designation Revisions: Lakes and Reservoirs

Regulation	County	Waterbody	Rule change and Rationale*
R317-2-13.12.b	Box Elder	Willard Bay Reservoir	Delete 2B – Retain 2A
R317-2-13.12.c	Cache	Hyrum Reservoir	Delete 2B – Retain 2A Delete "***" since not site-specific temperature standard has been promulgated
R317-2-13.12.e	Daggett	Flaming Gorge Reservoir (Utah portion)	Delete 2B – Retain 2A
R317-2-13.12.g	Duchesne	Moon Lake	Delete 2B – Retain 2A
R317-2-13.12.g	Duchesne	Scout Lake	Delete 2B – Retain 2A
R317-2-13.12.g	Duchesne	Starvation Reservoir	Delete 2B – Retain 2A
R317-2-13.12.h	Emery	Huntington North Reservoir	Delete 2B – Retain 2A
R317-2-13.12.h	Emery	Joe's Valley Reservoir	Delete 2B – Retain 2A
R317-2-13.12.h	Emery	Millsite Reservoir	Delete 2B – Retain 2A
R317-2-13.12.k	Juab	Sevier Bridge (Yuba) Reservoir	Delete 2B – Retain 2A
R317-2-13.12.n	Morgan	East Canyon Reservoir	Delete 2B – Retain 2A
R317-2-13.12.p	Rich	Bear Lake (Utah portion)	Delete 2B – Retain 2A
R317-2-13.12.r	San Juan	Lake Powell (Utah portion)	Delete 2B – Retain 2A
R317-2-13.12.s	Sanpete	Palisade Reservoir	Delete 2B – Retain 2A
R317-2-13.12.u	Summit	Echo Reservoir	Delete 2B – Retain 2A
R317-2-13.12.u	Summit	Lyman Lake	Delete 2B – Retain 2A

ENCLOSURE 1

Regulation	County	Waterbody	Rule change and Rationale*
R317-2-13.12.u	Summit	Rockport Reservoir	Delete 2B – Retain 2A
R317-2-13.12.w	Uintah	Red Fleet Reservoir	Delete 2B – Retain 2A
R317-2-13.12.w	Uintah	Steinaker Reservoir	Delete 2B – Retain 2A
R317-2-13.12.x	Utah	<u>Big East Lake</u>	Assign beneficial uses (2B, 3A, 4) to a waterbody that was not previously classified
R317-2-13.12.y	Wasatch	Deer Creek Reservoir	Delete 2B – Retain 2A
R317-2-13.12.z	Washington	<u>Sand Hollow Reservoir</u>	Assign beneficial uses (1, 2A, 3B, 4) to a waterbody that was not previously classified

*Class 2A -- Protected for frequent primary contact recreation where there is a high likelihood of ingestion of water or a high degree of bodily contact with the water. Examples include, but are not limited to, swimming, rafting, kayaking, diving, and water skiing.

Class 2B -- Protected for infrequent primary contact recreation. Also protected for secondary contact recreation where there is a low likelihood of ingestion of water or a low degree of bodily contact with the water. Examples include, but are not limited to, wading, hunting, and fishing.

Class 3A -- Protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain.

Class 4 -- Protected for agricultural uses including irrigation of crops and stock watering.

Attachment 2
Utah Water Quality Board Meeting, January 25, 2012
Mark-Up of R317-2

Deletions: Strikeout and brackets

Additions: Underline

Green Highlighting: Additional changes proposed January 2012

Yellow highlighting: Changes proposed September 2011 Board Meeting

R317. Environmental Quality, Water Quality.

R317-2. Standards of Quality for Waters of the State.

R317-2-1A. Statement of Intent.

Whereas the pollution of the waters of this state constitute a menace to public health and welfare, creates public nuisances, is harmful to wildlife, fish and aquatic life, and impairs domestic, agricultural, industrial, recreational and other legitimate beneficial uses of water, and whereas such pollution is contrary to the best interests of the state and its policy for the conservation of the water resources of the state, it is hereby declared to be the public policy of this state to conserve the waters of the state and to protect, maintain and improve the quality thereof for public water supplies, for the propagation of wildlife, fish and aquatic life, and for domestic, agricultural, industrial, recreational and other legitimate beneficial uses; to provide that no waste be discharged into any waters of the state without first being given the degree of treatment necessary to protect the legitimate beneficial uses of such waters; to provide for the prevention, abatement and control of new or existing water pollution; to place first in priority those control measures directed toward elimination of pollution which creates hazards to the public health; to insure due consideration of financial problems imposed on water polluters through pursuit of these objectives; and to cooperate with other agencies of the state, agencies of other states and the federal government in carrying out these objectives.

R317-2-1B. Authority.

These standards are promulgated pursuant to Sections 19-5-104 and 19-5-110.

R317-2-1C. Triennial Review.

The water quality standards shall be reviewed and updated, if necessary, at least once every three years. The Executive Secretary will seek input through a cooperative process from stakeholders representing state and federal agencies, various interest groups, and the public to develop a preliminary draft of changes. Proposed changes will be presented to the Water Quality Board for information. Informal public meetings may be held to

present preliminary proposed changes to the public for comments and suggestions. Final proposed changes will be presented to the Water Quality Board for approval and authorization to initiate formal rulemaking. Public hearings will be held to solicit formal comments from the public. The Executive Secretary will incorporate appropriate changes and return to the Water Quality Board to petition for formal adoption of the proposed changes following the Division of Administrative Rules' rulemaking procedures.

R317-2-2. Scope.

These standards shall apply to all waters of the state and shall be assigned to specific waters through the classification procedures prescribed by Sections 19-5-104(5) and 19-5-110 and R317-2-6.

R317-2-3. Antidegradation Policy.

3.1 Maintenance of Water Quality

Waters whose existing quality is better than the established standards for the designated uses will be maintained at high quality unless it is determined by the Board, after appropriate intergovernmental coordination and public participation in concert with the Utah continuing planning process, allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. However, existing instream water uses shall be maintained and protected. No water quality degradation is allowable which would interfere with or become injurious to existing instream water uses.

In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with Section 316 of the Federal Clean Water Act.

3.2 Category 1 Waters

Waters which have been determined by the Board to be of exceptional recreational or ecological significance or have been determined to be a State or National resource requiring protection, shall be maintained at existing high quality through designation, by the Board after public hearing, as Category 1 Waters. New point source discharges of wastewater, treated or otherwise, are prohibited in such segments after the effective date of designation. Protection of such segments from pathogens in diffuse, underground sources is covered in R317-5 and R317-7 and the Regulations for Individual Wastewater Disposal Systems (R317-501 through R317-515). Other diffuse sources (nonpoint sources) of wastes shall be controlled to the extent feasible through implementation of best management practices or regulatory programs.

Projects such as, but not limited to, construction of dams or roads will be considered. Discharges may be allowed where pollution will be temporary and limited after consideration of the factors

in R317-2-3.5.b.4., and where best management practices will be employed to minimize pollution effects.

Waters of the state designated as Category 1 Waters are listed in R317-2-12.1.

3.3 Category 2 Waters

Category 2 Waters are designated surface water segments which are treated as Category 1 Waters except that a point source discharge may be permitted provided that the discharge does not degrade existing water quality. Discharges may be allowed where pollution will be temporary and limited after consideration of the factors in R317-2-3.5.b.4., and where best management practices will be employed to minimize pollution effects. Waters of the state designated as Category 2 Waters are listed in R317-2-12.2.

3.4 Category 3 Waters

For all other waters of the state, point source discharges are allowed and degradation may occur, pursuant to the conditions and review procedures outlined in Section 3.5.

3.5 Antidegradation Review (ADR)

An antidegradation review will determine whether the proposed activity complies with the applicable antidegradation requirements for receiving waters that may be affected.

An antidegradation review (ADR) may consist of two parts or levels. A Level I review is conducted to insure that existing uses will be maintained and protected.

Both Level I and Level II reviews will be conducted on a parameter-by-parameter basis. A decision to move to a Level II review for one parameter does not require a Level II review for other parameters. Discussion of parameters of concern is those expected to be affected by the proposed activity.

Antidegradation reviews shall include opportunities for public participation, as described in Section 3.5e.

a. Activities Subject to Antidegradation Review (ADR)

1. For all State waters, antidegradation reviews will be conducted for proposed federally regulated activities, such as those under Clean Water Act Sections 401 (FERC and other Federal actions), 402 (UPDES permits), and 404 (Army Corps of Engineers permits). The Executive Secretary may conduct an ADR on any projects with the potential for major impact on the quality of waters of the state. The review will determine whether the proposed activity complies with the applicable antidegradation requirements for the particular receiving waters that may be affected.

2. For Category 1 Waters and Category 2 Waters, reviews shall be consistent with the requirement established in Sections 3.2 and 3.3, respectively.

3. For Category 3 Waters, reviews shall be consistent with the requirements established in this section

b. An Anti-degradation Level II review is not required where any of the following conditions apply:

1. Water quality will not be lowered by the proposed

activity or for existing permitted facilities, water quality will not be further lowered by the proposed activity, examples include situations where:

(a) the proposed concentration-based effluent limit is less than or equal to the ambient concentration in the receiving water during critical conditions; or

(b) a UPDES permit is being renewed and the proposed effluent concentration and loading limits are equal to or less than the concentration and loading limits in the previous permit; or

(c) a UPDES permit is being renewed and new effluent limits are to be added to the permit, but the new effluent limits are based on maintaining or improving upon effluent concentrations and loads that have been observed, including variability; or

~~(d) a new or renewed UPDES permit is being issued, and water quality based effluent limits are not required for a specific pollutant because it has been determined that the discharge will not cause, have reasonable potential to cause, or contribute to an exceedance of a State water quality standard for the pollutant~~

2. Assimilative capacity (based upon concentration) is not available or has previously been allocated, as indicated by water quality monitoring or modeling information. This includes situations where:

(a) the water body is included on the current 303(d) list for the parameter of concern; or

(b) existing water quality for the parameter of concern does not satisfy applicable numeric or narrative water quality criteria; or

(c) discharge limits are established in an approved TMDL that is consistent with the current water quality standards for the receiving water (i.e., where TMDLs are established, and changes in effluent limits that are consistent with the existing load allocation would not trigger an antidegradation review).

Under conditions (a) or (b) the effluent limit in an UPDES permit may be equal to the water quality numeric criterion for the parameter of concern.

3. Water quality impacts will be temporary and related only to sediment or turbidity and fish spawning will not be impaired,

4. The water quality effects of the proposed activity are expected to be temporary and limited. As general guidance, CWA Section 402 general permits, CWA Section 404 nationwide and general permits, or activities of short duration, will be deemed to have a temporary and limited effect on water quality where there is a reasonable factual basis to support such a conclusion.

The 404 nationwide permits decision will be made at the time of permit issuance, as part of the Division's water quality certification under CWA Section 401. Where it is determined that the category of activities will result in temporary and limited effects, subsequent individual activities authorized under such permits will not be subject to further antidegradation review.

Factors to be considered in determining whether water quality effects will be temporary and limited may include the following:

- (a) Length of time during which water quality will be lowered.
- (b) Percent change in ambient concentrations of pollutants of concern
- (c) Pollutants affected
- (d) Likelihood for long-term water quality benefits to the segment (e.g., dredging of contaminated sediments)
- (e) Potential for any residual long-term influences on existing uses.
- (f) Impairment of the fish spawning, survival and development of aquatic fauna excluding fish removal efforts.

c. Anti-degradation Review Process

For all activities requiring a Level II review, the Division will notify affected agencies and the public with regards to the requested proposed activity and discussions with stakeholders may be held. In the case of Section 402 discharge permits, if it is determined that a discharge will be allowed, the Division of Water Quality will develop any needed UPDES permits for public notice following the normal permit issuance process.

The ADR will cover the following requirements or determinations:

1. Will all Statutory and regulatory requirements be met?

The Executive Secretary will review to determine that there will be achieved all statutory and regulatory requirements for all new and existing point sources and all required cost-effective and reasonable best management practices for nonpoint source control in the area of the discharge. If point sources exist in the area that have not achieved all statutory and regulatory requirements, the Executive Secretary will consider whether schedules of compliance or other plans have been established when evaluating whether compliance has been assured. Generally, the "area of the discharge" will be determined based on the parameters of concern associated with the proposed activity and the portion of the receiving water that would be affected.

2. Are there any reasonable less-degrading alternatives?

There will be an evaluation of whether there are any reasonable non-degrading or less degrading alternatives for the proposed activity. This question will be addressed by the Division based on information provided by the project proponent. Control alternatives for a proposed activity will be evaluated in an effort to avoid or minimize degradation of the receiving water.

Alternatives to be considered, evaluated, and implemented to the extent feasible, could include pollutant trading, water conservation, water recycling and reuse, land application, total containment, etc.

For proposed UPDES permitted discharges, the following list of alternatives should be considered, evaluated and implemented to the extent feasible:

- (a) innovative or alternative treatment options
- (b) more effective treatment options or higher treatment levels
- (c) connection to other wastewater treatment facilities
- (d) process changes or product or raw material substitution
- (e) seasonal or controlled discharge options to minimize discharging during critical water quality periods
- (f) pollutant trading
- (g) water conservation
- (h) water recycle and reuse
- (i) alternative discharge locations or alternative receiving waters
- (j) land application
- (k) total containment
- (l) improved operation and maintenance of existing treatment systems
- (m) other appropriate alternatives

An option more costly than the cheapest alternative may have to be implemented if a substantial benefit to the stream can be realized. Alternatives would generally be considered feasible where costs are no more than 20% higher than the cost of the discharging alternative, and (for POTWs) where the projected per connection service fees are not greater than 1.4% of MAGHI (median adjusted gross household income), the current affordability criterion now being used by the Water Quality Board in the wastewater revolving loan program. Alternatives within these cost ranges should be carefully considered by the discharger. Where State financing is appropriate, a financial assistance package may be influenced by this evaluation, i.e., a less polluting alternative may receive a more favorable funding arrangement in order to make it a more financially attractive alternative.

It must also be recognized in relationship to evaluating options that would avoid or reduce discharges to the stream, that in some situations it may be more beneficial to leave the water in the stream for instream flow purposes than to remove the discharge to the stream.

3. Special Procedures for 404 Permits.

For 404 permitted activities, all appropriate alternatives to avoid and minimize degradation should be evaluated. Activities involving a discharge of dredged or fill materials that are considered to have more than minor adverse effects on the aquatic environment are regulated by individual CWA Section 404 permits. The decision-making process relative to the 404 permitting program is contained in the 404(b)(1) guidelines (40 CFR Part 230). Prior to issuing a permit under the 404(b)(1) guidelines, the Corps of Engineers:

- (a) makes a determination that the proposed activity discharges are unavoidable (i.e., necessary):
- (b) examines alternatives to the proposed activity and authorize only the least damaging practicable alternative; and

(c) requires mitigation for all impacts associated with the activity. A 404(b)(1) finding document is produced as a result of this procedure and is the basis for the permit decision. Public participation is provided for in the process. Because the 404(b)(1) guidelines contains an alternatives analysis, the executive secretary will not require development of a separate alternatives analysis for the anti-degradation review. The division will use the analysis in the 404(b)(1) finding document in completing its anti-degradation review and 401 certification.

4. Does the proposed activity have economic and social importance?

Although it is recognized that any activity resulting in a discharge to surface waters will have positive and negative aspects, information must be submitted by the applicant that any discharge or increased discharge will be of economic or social importance in the area.

The factors addressed in such a demonstration may include, but are not limited to, the following:

(a) employment (i.e., increasing, maintaining, or avoiding a reduction in employment);

(b) increased production;

(c) improved community tax base;

(d) housing;

(e) correction of an environmental or public health problem; and

(f) other information that may be necessary to determine the social and economic importance of the proposed surface water discharge.

5. The applicant may submit a proposal to mitigate any adverse environmental effects of the proposed activity (e.g., instream habitat improvement, bank stabilization). Such mitigation plans should describe the proposed mitigation measures and the costs of such mitigation. Mitigation plans will not have any effect on effluent limits or conditions included in a permit (except possibly where a previously completed mitigation project has resulted in an improvement in background water quality that affects a water quality-based limit). Such mitigation plans will be developed and implemented by the applicant as a means to further minimize the environmental effects of the proposed activity and to increase its socio-economic importance. An effective mitigation plan may, in some cases, allow the Executive Secretary to authorize proposed activities that would otherwise not be authorized.

6. Will water quality standards be violated by the discharge?

Proposed activities that will affect the quality of waters of the state will be allowed only where the proposed activity will not violate water quality standards.

7. Will existing uses be maintained and protected?

Proposed activities can only be allowed if "existing uses"

will be maintained and protected. No UPDES permit will be allowed which will permit numeric water quality standards to be exceeded in a receiving water outside the mixing zone. In the case of nonpoint pollution sources, the non-regulatory Section 319 program now in place will address these sources through application of best management practices to ensure that numeric water quality standards are not exceeded.

8. If a situation is found where there is an existing use which is a higher use (i.e., more stringent protection requirements) than that current designated use; the Division will apply the water quality standards and anti-degradation policy to protect the existing use. Narrative criteria may be used as a basis to protect existing uses for parameters where numeric criteria have not been adopted. Procedures to change the stream use designation to recognize the existing use as the designated use would be initiated.

d. Special Procedures for Drinking Water Sources

An Antidegradation Level II Review will be required by the Executive Secretary for discharges to waters with a Class 1C drinking water use assigned.

Depending upon the locations of the discharge and its proximity to downstream drinking water diversions, additional treatment or more stringent effluent limits or additional monitoring, beyond that which may otherwise be required to meet minimum technology standards or in stream water quality standards, may be required by the Executive Secretary in order to adequately protect public health and the environment. Such additional treatment may include additional disinfection, suspended solids removal to make the disinfection process more effective, removal of any specific contaminants for which drinking water maximum contaminant levels (MCLs) exists, and/or nutrient removal to reduce the organic content of raw water used as a source for domestic water systems.

Additional monitoring may include analyses for viruses, Giardia, Cryptosporidium, other pathogenic organisms, and/or any contaminant for which drinking water MCLs exist. Depending on the results of such monitoring, more stringent treatment may then be required.

The additional treatment/effluent limits/monitoring which may be required will be determined by the Executive Secretary after consultation with the Division of Drinking Water and the downstream drinking water users.

e. Public Notice

The public will be provided notice and an opportunity to comment on the conclusions of all completed antidegradation reviews. Where possible, public notice on the antidegradation review conclusions will be combined with the public notice on the proposed permitting action. In the case of UPDES permits, public notice will be provided through the normal permitting process, as all draft permits are public noticed for 30 days, and public

comment solicited, before being issued as a final permit. The Statement of Basis for the draft UPDES permit will contain information on how the ADR was addressed including results of the Level I and Level II reviews. In the case of Section 404 permits from the Corps of Engineers, the Division of Water Quality will develop any needed 401 Certifications and the public notice will be published in conjunction with the US Corps of Engineers public notice procedures. Other permits requiring a Level II review will receive a separate public notice according to the normal State public notice procedures.

f. Implementation Procedures

The Executive Secretary shall establish reasonable protocols and guidelines (1) for completing technical, social, and economic need demonstrations, (2) for review and determination of adequacy of Level II ADRs and (3) for determination of additional treatment requirements. Protocols and guidelines will consider federal guidance and will include input from local governments, the regulated community, and the general public. The Executive Secretary will inform the Water Quality Board of any protocols or guidelines that are developed.

R317-2-4. Colorado River Salinity Standards.

In addition to quality protection afforded by these regulations to waters of the Colorado River and its tributaries, such waters shall be protected also by requirements of "Proposed Water Quality Standards for Salinity including Numeric Criteria and Plan of Implementation for Salinity Control, Colorado River System, June 1975" and a supplement dated August 26, 1975, entitled "Supplement, including Modifications to Proposed Water Quality Standards for Salinity including Numeric Criteria and Plan of Implementation for Salinity Control, Colorado River System, June 1975", as approved by the seven Colorado River Basin States and the U.S. Environmental Protection Agency, as updated by the 1978 Revision and the 1981, 1984, 1987, 1990, 1993, 1996, 1999, 2002, 2005, and 2008, and 2011 Reviews of the above documents.

R317-2-5. Mixing Zones.

A mixing zone is a limited portion of a body of water, contiguous to a discharge, where dilution is in progress but has not yet resulted in concentrations which will meet certain standards for all pollutants. At no time, however, shall concentrations within the mixing zone be allowed which are acutely lethal as determined by bioassay or other approved procedure. Mixing zones may be delineated for the purpose of guiding sample collection procedures and to determine permitted effluent limits. The size of the chronic mixing zone in rivers and streams shall not to exceed 2500 feet and the size of an acute mixing zone shall not exceed 50% of stream width nor have a residency time of greater than 15 minutes. Streams with a flow equal to or less than twice the flow of a point source discharge may be considered to be

totally mixed. The size of the chronic mixing zone in lakes and reservoirs shall not exceed 200 feet and the size of an acute mixing zone shall not exceed 35 feet. Domestic wastewater effluents discharged to mixing zones shall meet effluent requirements specified in R317-1-3.

5.1 Individual Mixing Zones. Individual mixing zones may be further limited or disallowed in consideration of the following factors in the area affected by the discharge:

- a. Bioaccumulation in fish tissues or wildlife,
- b. Biologically important areas such as fish spawning/nursery areas or segments with occurrences of federally listed threatened or endangered species,
- c. Potential human exposure to pollutants resulting from drinking water or recreational activities,
- d. Attraction of aquatic life to the effluent plume, where toxicity to the aquatic life is occurring.
- e. Toxicity of the substance discharged,
- f. Zone of passage for migrating fish or other species (including access to tributaries), or
- g. Accumulative effects of multiple discharges and mixing zones.

R317-2-6. Use Designations.

The Board as required by Section 19-5-110, shall group the waters of the state into classes so as to protect against controllable pollution the beneficial uses designated within each class as set forth below. Surface waters of the state are hereby classified as shown in R317-2-13.

6.1 Class 1 -- Protected for use as a raw water source for domestic water systems.

- a. Class 1A -- Reserved.
- b. Class 1B -- Reserved.
- c. Class 1C -- Protected for domestic purposes with prior treatment by treatment processes as required by the Utah Division of Drinking Water

6.2 Class 2 -- Protected for recreational use and aesthetics.

a. Class 2A -- Protected for frequent primary contact recreation where there is a high likelihood of ingestion of water or a high degree of bodily contact with the water. Examples include, but are not limited to, swimming, rafting, kayaking, diving, and water skiing.

b. Class 2B -- Protected for infrequent primary contact recreation. Also protected for secondary contact recreation where there is a low likelihood of ingestion of water or a low degree of bodily contact with the water. Examples include, but are not limited to, wading, hunting, and fishing.

6.3 Class 3 -- Protected for use by aquatic wildlife.

a. Class 3A -- Protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic

organisms in their food chain.

b. Class 3B -- Protected for warm water species of game fish and other warm water aquatic life, including the necessary aquatic organisms in their food chain.

c. Class 3C -- Protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain.

d. Class 3D -- Protected for waterfowl, shore birds and other water-oriented wildlife not included in Classes 3A, 3B, or 3C, including the necessary aquatic organisms in their food chain.

e. Class 3E -- Severely habitat-limited waters. Narrative standards will be applied to protect these waters for aquatic wildlife.

6.4 Class 4 -- Protected for agricultural uses including irrigation of crops and stock watering.

6.5 Class 5 -- The Great Salt Lake.

a. Class 5A Gilbert Bay

Geographical Boundary -- All open waters at or below approximately 4,208-foot elevation south of the Union Pacific Causeway, excluding all of the Farmington Bay south of the Antelope Island Causeway and salt evaporation ponds.

Beneficial Uses -- Protected for frequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.

b. Class 5B Gunnison Bay

Geographical Boundary -- All open waters at or below approximately 4,208-foot elevation north of the Union Pacific Causeway and west of the Promontory Mountains, excluding salt evaporation ponds.

Beneficial Uses -- Protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.

c. Class 5C Bear River Bay

Geographical Boundary -- All open waters at or below approximately 4,208-foot elevation north of the Union Pacific Causeway and east of the Promontory Mountains, excluding salt evaporation ponds.

Beneficial Uses -- Protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.

d. Class 5D Farmington Bay

Geographical Boundary -- All open waters at or below approximately 4,208-foot elevation east of Antelope Island and south of the Antelope Island Causeway, excluding salt evaporation ponds.

Beneficial Uses -- Protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.

e. Class 5E Transitional Waters along the Shoreline of the Great Salt Lake Geographical Boundary -- All waters below

approximately 4,208-foot elevation to the current lake elevation of the open water of the Great Salt Lake receiving their source water from naturally occurring springs and streams, impounded wetlands, or facilities requiring a UPDES permit. The geographical areas of these transitional waters change corresponding to the fluctuation of open water elevation.

Beneficial Uses -- Protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.

R317-2-7. Water Quality Standards.

7.1 Application of Standards

The numeric criteria listed in R317-2-14 shall apply to each of the classes assigned to waters of the State as specified in R317-2-6. It shall be unlawful and a violation of these regulations for any person to discharge or place any wastes or other substances in such manner as may interfere with designated uses protected by assigned classes or to cause any of the applicable standards to be violated, except as provided in R317-1-3.1. At a minimum, assessment of the beneficial use support for waters of the state will be conducted biennially and available for a 30-day period of public comment and review. Monitoring locations and target indicators of water quality standards shall be prioritized and published yearly. For water quality assessment purposes, up to 10 percent of the representative samples may exceed the minimum or maximum criteria for dissolved oxygen, pH, E. coli, total dissolved solids, and temperature, including situations where such criteria have been adopted on a site-specific basis. The Board may allow site specific modifications based upon bioassay or other tests performed in accordance with standard procedures determined by the Board. Site specific criterion may be developed based on bioassay or other tests performed in accordance with standard procedures determined by the Board by rulemaking. Site specific criterion may be adopted by rulemaking where biomonitoring data, bioassays, or other scientific analyses indicate that the statewide criterion is over or under protective of the designated uses or where natural or un-alterable conditions or other factors as defined in 40 CFR 131.10(g) prevent the attainment of the statewide criterion.

7.2 Narrative Standards

It shall be unlawful, and a violation of these regulations, for any person to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural deposits, floating debris, oil, scum or other nuisances such as color, odor or taste; or cause conditions which produce undesirable aquatic life or which produce objectionable tastes in edible aquatic organisms; or result in concentrations or combinations of substances which produce undesirable physiological responses in desirable resident fish, or other desirable aquatic life, or undesirable human health effects, as determined by

bioassay or other tests performed in accordance with standard procedures.

R317-2-8. Protection of Downstream Uses.

All actions to control waste discharges under these regulations shall be modified as necessary to protect downstream designated uses.

R317-2-9. Intermittent Waters.

Failure of a stream to meet water quality standards when stream flow is either unusually high or less than the 7-day, 10-year minimum flow shall not be cause for action against persons discharging wastes which meet both the requirements of R317-1 and the requirements of applicable permits.

R317-2-10. Laboratory and Field Analyses.

10.1 Laboratory Analyses

All laboratory examinations of samples collected to determine compliance with these regulations shall be performed in accordance with standard procedures as approved by the Utah Division of Water Quality by the Utah Office of State Health Laboratory or by a laboratory certified by the Utah Department of Health.

10.2 Field Analyses

All field analyses to determine compliance with these regulations shall be conducted in accordance with standard procedures specified by the Utah Division of Water Quality.

R317-2-11. Public Participation.

Public hearings will be held to review all proposed revisions of water quality standards, designations and classifications, and public meetings may be held for consideration of discharge requirements set to protect water uses under assigned classifications.

R317-2-12. Category 1 and Category 2 Waters.

12.1 Category 1 Waters.

In addition to assigned use classes, the following surface waters of the State are hereby designated as Category 1 Waters:

a. All surface waters geographically located within the outer boundaries of U.S. National Forests whether on public or private lands with the following exceptions:

1. Category 2 Waters as listed in R317-2-12.2.

2. Weber River, a tributary to the Great Salt Lake, in the Weber River Drainage from Uintah to Mountain Green.

b. Other surface waters, which may include segments within U.S. National Forests as follows:

1. Colorado River Drainage

Calf Creek and tributaries, from confluence with Escalante River to headwaters.

Sand Creek and tributaries, from confluence with Escalante

River to headwaters.

Mamie Creek and tributaries, from confluence with Escalante River to headwaters.

Deer Creek and tributaries, from confluence with Boulder Creek to headwaters (Garfield County).

Indian Creek and tributaries, through Newspaper Rock State Park to headwaters.

2. Green River Drainage

Price River (Lower Fish Creek from confluence with White River to Scofield Dam.

Range Creek and tributaries, from confluence with Green River to headwaters.

Strawberry River and tributaries, from confluence with Red Creek to headwaters.

Ashley Creek and tributaries, from Steinaker diversion to headwaters.

Jones Hole Creek and tributaries, from confluence with Green River to headwaters.

Green River, from state line to Flaming Gorge Dam.

Tollivers Creek, from confluence with Green River to headwaters.

Allen Creek, from confluence with Green River to headwaters.

3. Virgin River Drainage

North Fork Virgin River and tributaries, from confluence with East Fork Virgin River to headwaters.

East Fork Virgin River and tributaries from confluence with North Fork Virgin River to headwaters.

4. Kanab Creek Drainage

Kanab Creek and tributaries, from irrigation diversion at confluence with Reservoir Canyon to headwaters.

5. Bear River Drainage

Swan Creek and tributaries, from Bear Lake to headwaters.

North Eden Creek, from Upper North Eden Reservoir to headwaters.

Big Creek and tributaries, from Big Ditch diversion to headwaters.

Woodruff Creek and tributaries, from Woodruff diversion to headwaters.

6. Weber River Drainage

Burch Creek and tributaries, from Harrison Boulevard in Ogden to headwaters.

Hardscrabble Creek and tributaries, from confluence with East Canyon Creek to headwaters.

Chalk Creek and tributaries, from U.S. Highway 189 Main Street in Coalville to headwaters.

Weber River and tributaries, from U.S. Highway 189 Utah State Route 32 near Oakley to headwaters.

7. Jordan River Drainage

City Creek and tributaries, from City Creek Water Treatment Plant to headwaters (Salt Lake County).

Emigration Creek and tributaries, from Hogle Zoo to headwaters (Salt Lake County).

Red Butte Creek and tributaries, from Foothill Boulevard in Salt Lake City to headwaters.

Parley's Creek and tributaries, from 13th East in Salt Lake City to headwaters.

Mill Creek and tributaries, from Wasatch Boulevard in Salt Lake City to headwaters.

Big Cottonwood Creek and tributaries, from Wasatch Boulevard in Salt Lake City to headwaters.

Little Willow Creek and tributaries, from diversion to headwaters (Salt Lake County.)

Bell Canyon Creek and tributaries, from Lower Bells Canyon Reservoir to headwaters (Salt Lake County).

South Fork of Dry Creek and tributaries, from Draper Irrigation Company diversion to headwaters (Salt Lake County).

8. Provo River Drainage

Upper Falls drainage above Provo City diversion (Utah County).

Bridal Veil Falls drainage above Provo City diversion (Utah County).

Lost Creek and tributaries, above Provo City diversion (Utah County).

9. Sevier River Drainage

Chicken Creek and tributaries, from diversion at canyon mouth to headwaters.

Pigeon Creek and tributaries, from diversion to headwaters.

East Fork of Sevier River and tributaries, from Kingston diversion to headwaters.

Parowan Creek and tributaries, from Parowan City to headwaters.

Summit Creek and tributaries, from Summit City to headwaters.

Braffits Creek and tributaries, from canyon mouth to headwaters.

Right Hand Creek and tributaries, from confluence with Coal Creek to headwaters.

10. Raft River Drainage

Clear Creek and tributaries, from state line to headwaters (Box Elder County).

Birch Creek (Box Elder County), from state line to headwaters.

Cotton Thomas Creek from confluence with South Junction Creek to headwaters.

11. Western Great Salt Lake Drainage

All streams on the south slope of the Raft River Mountains above 7000' mean sea level.

Donner Creek (Box Elder County), from irrigation diversion to Utah-Nevada state line.

Bettridge Creek (Box Elder County), from irrigation diversion to Utah-Nevada state line.

Clover Creek, from diversion to headwaters.
All surface waters on public land on the Deep Creek Mountains.

12. Farmington Bay Drainage

Holmes Creek and tributaries, from Highway US-89 to headwaters (Davis County).

Shepard Creek and tributaries, from Height Haight Bench diversion to headwaters (Davis County).

Farmington Creek and tributaries, from Height Haight Bench Canal diversion to headwaters (Davis County).

Steed Creek and tributaries, from Highway US-89 to headwaters (Davis County).

12.2 Category 2 Waters.

In addition to assigned use classes, the following surface waters of the State are hereby designated as Category 2 Waters:

a. Green River Drainage

Deer Creek, a tributary of Huntington Creek, from the forest boundary to 4800 feet upstream.

Electric Lake.

b.

Weber River Drainage

Weber River from Uintah to Mountain Green.

R317-2-13. Classification of Waters of the State (see R317-2-6).

a. Colorado River Drainage

13.1 Upper Colorado River Basin

TABLE

Paria River and tributaries, from state line to headwaters	2B	3C	4
All tributaries to Lake Powell, except as listed below	2B	3B	4
Tributaries to Escalante River from confluence with Boulder Creek to headwaters, including Boulder Creek	2B 3A		4
Dirty Devil River and tributaries, from Lake Powell to Fremont River	2B	3C	4
Deer Creek and tributaries, from confluence with Boulder Creek to headwaters	2B 3A		4
Fremont River and tributaries, from confluence with Muddy Creek to Capitol			

Reef National Park, except as listed below	1C	2B	3C	4
Pleasant Creek and tributaries, from confluence with Fremont River to East boundary of Capitol Reef National Park		2B	3C	4
Pleasant Creek and tributaries, from East boundary of Capitol Reef National Park to headwaters	1C	2B 3A		
Fremont River and tributaries, through Capitol Reef National Park to headwaters	1C	2A 2B	3A	4
Muddy Creek and tributaries, from confluence with Fremont River to Highway U-10 crossing, except as listed below		2B	3C	4
Quitichupah Creek and Tributaries, from Highway U-10 crossing to headwaters		2B 3A		4
Ivie Creek and tributaries, from Highway U-10 to headwaters		2B 3A		4
Muddy Creek and tributaries, from Highway U-10 crossing to headwaters	1C	2B 3A		4
San Juan River and Tributaries, from Lake Powell to state line except As listed below:	1C 2A		3B	4
Johnson Creek and tributaries, from confluence with Recapture Creek to headwaters	1C	2B 3A		4
Verdure Creek and tributaries, from Highway US-191 crossing to headwaters		2B 3A		4

North Creek and tributaries, from confluence with Montezuma Creek to headwaters	1C	2B 3A	4
South Creek and tributaries, from confluence with Montezuma Creek to headwaters	1C	2B 3A	4
Spring Creek and tributaries, from confluence with Vega Creek to headwaters		2B 3A	4
Montezuma Creek and tributaries, from U.S. Highway 191 to headwaters	1C	2B 3A	4
Colorado River and tributaries, from Lake Powell to state line except as listed below	1C 2A	3B	4
Indian Creek and tributaries, through Newspaper Rock State Park to headwaters	1C	2B 3A	4
Kane Canyon Creek and tributaries, from confluence with Colorado River to headwaters		2B 3C	4
Mill Creek and tributaries, from confluence with Colorado River to headwaters	1C	2B 3A	4
Dolores River and tributaries, from confluence with Colorado River to state line		2B 3C	4
Roc Creek and tributaries, from confluence with Dolores River to headwaters		2B 3A	4
LaSal Creek and tributaries, from state line to headwaters		2B 3A	4
Lion Canyon Creek and tributaries, from state line to headwaters		2B 3A	4
Little Dolores River and tributaries, from confluence			

with Colorado River to state line	2B	3C	4
-----------------------------------	----	----	---

Bitter Creek and tributaries, from confluence with Colorado River to headwaters	2B	3C	4
---	----	----	---

b. Green River Drainage

TABLE

Green River and tributaries, from confluence with Colorado River to state line except as listed below:	1C 2A	3B	4
Thompson Creek and tributaries from Interstate Highway 70 to headwaters	2B	3C	4
San Rafael River and tributaries, from confluence with Green River to confluence with Ferron Creek	2B	3C	4
Ferron Creek and tributaries, from confluence with San			
Rafael River to Millsite Reservoir	2B	3C	4
Ferron Creek and tributaries, from Millsite Reservoir to headwaters	1C	2B 3A	4
Huntington Creek and tributaries, from confluence with Cottonwood Creek to Highway U-10 crossing	2B	3C	4
Huntington Creek and tributaries, from Highway U-10 crossing to headwaters	1C	2B 3A	4
Cottonwood Creek and tributaries, from confluence with Huntington Creek to			
Highway U-57 crossing Cottonwood Creek and tributaries, from Highway U-57 crossing to headwaters	2B	3C	4
	1C	2B 3A	4

Cottonwood Canal, Emery County	1C	2B	3E	4
Price River and tributaries, from confluence with Green River to Carbon Canal Diversion at Price City Golf Course		2B	3C	4
Except as listed below Grassy Trail Creek and tributaries, from Grassy				
Trail Creek Reservoir to headwaters	1C	2B 3A		4
Price River and tributaries, from Carbon Canal Diversion at Price City Golf Course to Price City Water Treatment Plant intake.		2B 3A		4
Price River and tributaries, from Price City Water Treatment Plant intake to headwaters	1C	2B 3A		4
Range Creek and tributaries, from confluence with Green River to Range Creek Ranch		2B 3A		4
Range Creek and tributaries, from Range Creek Ranch to headwaters	1C	2B 3A		4
Rock Creek and tributaries, from confluence with Green River to headwaters		2B 3A		4
Nine Mile Creek and tributaries, from confluence with Green River to headwaters		2B 3A		4
Pariette Draw and tributaries, from confluence with Green River to headwaters		2B	3B 3D	4
Willow Creek and tributaries (Uintah County), from confluence with Green River to headwaters		2B 3A		4

White River and tributaries, from confluence with Green River to state line, except as listed below	2B	3B	4
Bitter Creek and Tributaries from White River to Headwaters	2B	3A	4
Duchesne River and tributaries, from confluence with Green River to Myton Water Treatment Plant intake, except as listed below	2B	3B	4
Uinta River and tributaries, From confluence with Duchesne River to Highway US-40 crossing	2B	3B	4
Uinta River and tributaries, From Highway US-4- crossing to headwaters	2B	3A	4
Power House Canal from Confluence with Uinta River to headwaters	2B	3A	4
Whiterocks River and Canal, From Tridell Water Treatment Plant to Headwaters	1C	2B 3A	4
Duchesne River and tributaries, from Myton Water Treatment Plant intake to headwaters	1C	2B 3A	4
Lake Fork River and tributaries, from confluence with Duchesne River to headwaters	1C	2B 3A	4
Lake Fork Canal from Dry Gulch Canal Diversion to Moon Lake	1C	2B	3E 4
Dry Gulch Canal, from Myton Water Treatment Plant to Lake Fork Canal	1C	2B	3E 4
Ashley Creek and			

tributaries, from confluence with Green River to Steinaker diversion	2B	3B	4
Ashley Creek and tributaries, from Steinaker diversion to headwaters	1C	2B 3A	4
Big Brush Creek and tributaries, from confluence with Green River to Tyzack (Red Fleet) Dam	2B	3B	4
Big Brush Creek and tributaries, from Tyzack (Red Fleet) Dam to headwaters	1C	2B 3A	4
Jones Hole Creek and tributaries, from confluence with Green River to headwaters	2B	3A	
Diamond Gulch Creek and tributaries, from confluence with Green River to headwaters	2B	3A	4
Pot Creek and tributaries, from Crouse Reservoir to headwaters	2B	3A	4
Green River and tributaries, from Utah-Colorado state line to Flaming Gorge Dam except as listed below:	2A	3A	4
Sears Creek and tributaries, Daggett County	2B	3A	
Tollivers Creek and tributaries, Daggett County	2B	3A	
Red Creek and tributaries, from confluence with Green River to state line	2B	3C	4
Jackson Creek and tributaries, Daggett County	2B	3A	
Davenport Creek and			

tributaries, Daggett County	2B 3A		
Goslin Creek and tributaries, Daggett County	2B 3A		
Gorge Creek and tributaries, Daggett County	2B 3A		
Beaver Creek and tributaries, Daggett County	2B 3A		
O-Wi-Yu-Kuts Creek and tributaries, Daggett County	2B 3A		
Tributaries to Flaming Gorge Reservoir, except as listed below	2B 3A		4
Birch Spring Draw and tributaries, from Flaming Gorge Reservoir to headwaters	2B	3C	4
Spring Creek and tributaries, from Flaming Gorge Reservoir to headwaters	2B 3A		
All Tributaries of Flaming Gorge Reservoir from Utah-Wyoming state line to headwaters	2B 3A		4

13.2 Lower Colorado River Basin
a. Virgin River Drainage

TABLE

Beaver Dam Wash and tributaries, from Motoqua to headwaters	2B	3B	4
Virgin River and tributaries from state line to Quail Creek diversion except as listed below	2B	3B	4
Santa Clara River from confluence with Virgin River to Gunlock Reservoir	1C	2B 3B	4
Santa Clara River and tributaries, from Gunlock Reservoir to headwaters	2B 3A		4
Leed's Creek, from confluence			

with Quail Creek to headwaters		2B 3A		4
Quail Creek from Quail Creek Reservoir to headwaters	1C	2B 3A		4
Ash Creek and tributaries, from confluence with Virgin River to Ash Creek Reservoir		2B 3A		4
Ash Creek and tributaries, From Ash Creek Reservoir to headwaters		2B 3A		4
Virgin River and tributaries, from the Quail Creek diversion to headwaters, except as listed below	1C	2B	3C	4
North Fork Virgin River and tributaries	1C 2A	3A		4
East Fork Virgin River, from town of Glendale to headwaters		2B 3A		4
Kolob Creek, from confluence with Virgin River to headwaters		2B 3A		4
b. Kanab Creek Drainage				

TABLE

Kanab Creek and tributaries, from state line to irrigation diversion at confluence with Reservoir Canyon		2B	3C	4
Kanab Creek and tributaries, from irrigation diversion at confluence with Reservoir Canyon to headwaters		2B 3A		4
Johnson Wash and tributaries, from state line to confluence with Skutumpah Canyon		2B	3C	4
Johnson Wash and tributaries, from confluence with Skutumpah Canyon to headwaters		2B 3A		4

13.3 Bear River Basin
a. Bear River Drainage

TABLE

Bear River and tributaries, from Great Salt Lake to Utah-Idaho border, except as listed below:	2B	3B	3D	4
Perry Canyon Creek from U.S. Forest boundary to headwaters	2B 3A			4
Box Elder Creek from confluence with Black Slough to Brigham City Reservoir (the Mayor's Pond)	2B		3C	4
Box Elder Creek, from Brigham City Reservoir (the Mayor's Pond) to headwaters	2B 3A			4
Salt Creek, from confluence with Bear River to Crystal Hot Springs	2B	3B	3D	
Malad River and tributaries, from confluence with Bear River to state line	2B		3C	
Little Bear River and tributaries, from Cutler Reservoir to headwaters	2B 3A		3D	4
Logan River and tributaries, from Cutler Reservoir to headwaters	2B 3A		3D	4
Blacksmith Fork and tributaries, from confluence with Logan River to headwaters	2B 3A			4
Newton Creek and tributaries, from Cutler Reservoir to Newton Reservoir	2B 3A			4
Clarkston Creek and tributaries, from Newton Reservoir to headwaters	2B 3A			4
Birch Creek and tributaries, from confluence with Clarkston Creek to headwaters	2B 3A			4

Summit Creek and tributaries,
from confluence with Bear River
to headwaters

2B 3A 4

Cub River and tributaries, from
confluence with Bear River to
state line, except as listed
below:

2B 3B 4

High Creek and tributaries,
from confluence with Cub River
to headwaters

2B 3A 4

All tributaries to Bear Lake from
Bear Lake to headwaters, except as
listed below

2B 3A 4

Swan Springs tributary to Swan
Creek

1C 2B 3A

Bear River and tributaries in
Rich County

2B 3A 4

Bear River and tributaries, from
Utah-Wyoming state line to
headwaters (Summit County)

2B 3A 4

Mill Creek and tributaries, from
state line to headwaters (Summit
County)

2B 3A 4

13.4 Weber River Basin a. Weber River Drainage

TABLE

Willard Creek, from Willard Bay
Reservoir to headwaters

2B 3A 4

Weber River, from Great Salt Lake
to Slaterville diversion, except
as listed below:

2B 3C 3D 4

Four Mile Creek from I-15
To headwaters

2B 3A 4

Weber River and tributaries, from
Slaterville diversion to Stoddard

diversion, except as listed below	2B	3A	4
Ogden River and tributaries, From confluence with Weber River To Pineview Dam, except as listed Below	<u>2A</u>	<u>2B</u> 3A	4
Wheeler Creek from Confluence with Ogden River to headwaters	1C	2B 3A	4
All tributaries to Pineview Reservoir	1C	2B 3A	4
Strongs Canyon Creek and Tributaries, from U.S. National Forest boundary to headwaters	1C	2B 3A	4
Burch Creek and tributaries, from Harrison Boulevard in Ogden to Headwaters	1C	2B 3A	
Spring Creek and tributaries, From U.S. National Forest Boundary to headwaters	1C	2B 3A	4
Weber River and tributaries, from Stoddard diversion to headwaters	1C	2B 3A	4

13.5 Utah Lake-Jordan River Basin
a. Jordan River Drainage

TABLE

Jordan River, from Farmington Bay to North Temple Street, Salt Lake City	2B	3B *	3D	4
State Canal, from Farmington Bay to confluence with the Jordan River	2B	3B *	3D	4
Jordan River, from North Temple Street in Salt Lake City to confluence with Little Cottonwood Creek	2B	3B *		4
Surplus Canal from Great Salt				

Lake to the diversion from the Jordan River		2B	3B *	3D	4
Jordan River from confluence with Little Cottonwood Creek to Narrows Diversion		2B	3A		4
Jordan River, from Narrows Diversion to Utah Lake	1C	2B	3B		4
City Creek, from Memory Park in Salt Lake City to City Creek Water Treatment Plant		2B	3A		
City Creek, from City Creek Water Treatment Plant to headwaters	1C	2B	3A		
<u>Red Butte Creek and tributaries from Liberty Park pond inlet to Red Butte Reservoir</u>		2B	3A		<u>4</u>
Red Butte Creek and tributaries, from Red Butte Reservoir to headwaters	1C	2B	3A		
Emigration Creek and tributaries, from <u>Feothill Boulevard 1100 East</u> in Salt Lake City to headwaters		2B	3A		<u>4</u>
Parley's Creek and tributaries, from 1300 East in Salt Lake City to Mountain Dell Reservoir <u>to headwaters</u>	1C	2B	3A		
Parley's Creek and tributaries, from Mountain Dell Reservoir to headwaters	1C	2B	3A		
Mill Creek (Salt Lake County) from confluence with Jordan River to Interstate Highway 15		2B	3C		4
Mill Creek (Salt Lake County) and tributaries from Interstate Highway 15 to headwaters		2B	3A		4
Big Cottonwood Creek and tributaries, from confluence with Jordan River to Big Cottonwood Water Treatment Plant		2B	3A		4

Big Cottonwood Creek and tributaries, from Big Cottonwood Water Treatment Plant to headwaters	1C	2B 3A		
Deaf Smith Canyon Creek and tributaries	1C	2B 3A		4
Little Cottonwood Creek and tributaries, from confluence with Jordan River to Metropolitan Water Treatment Plant		2B 3A		4
Little Cottonwood Creek and tributaries, from Metropolitan Water Treatment Plant to headwaters	1C	2B 3A		
Bell Canyon Creek and tributaries, from lower Bell's Canyon reservoir to headwaters	1C	2B 3A		
Little Willow Creek and tributaries, from Draper Irrigation Company diversion to headwaters	1C	2B 3A		
Big Willow Creek and tributaries, from Draper Irrigation Company diversion to headwaters	1C	2B 3A		
South Fork of Dry Creek and tributaries, from Draper				
Irrigation Company diversion to headwaters	1C	2B 3A		
All permanent streams on east slope of Oquirrh Mountains (Coon, Barney's, Bingham, Butterfield, and Rose Creeks)		2B	3D	4
Kersey Creek from confluence of C-7 Ditch to headwaters		2B	3D	

* Site specific criteria for dissolved oxygen. See Table 2.14.5.

b. Provo River Drainage

TABLE

Provo River and tributaries,
from Utah Lake to Murdock
diversion

2B 3A

4

Provo River and tributaries,
from Murdock Diversion to
headwaters, except as listed
below

1C

2B 3A

4

Upper Falls drainage above Provo
City diversion

1C

2B 3A

Bridal Veil Falls drainage above
Provo City diversion

1C

2B 3A

Lost Creek and tributaries above
Provo City diversion

1C

2B 3A

c. Utah Lake Drainage

TABLE

Dry Creek and tributaries (above
Alpine), from U.S. National
Forest boundary to headwaters

2B 3A

4

American Fork Creek and
tributaries, from diversion at
mouth of American Fork Canyon to
headwaters

2B 3A

4

Spring Creek and tributaries,
from Utah Lake near Lehi to
headwaters

2B 3A

4

Lindon Hollow Creek and
tributaries, from Utah Lake to
headwaters

2B

3B

4

Rock Canyon Creek and tributaries
(East of Provo) from U.S.
National Forest boundary to
headwaters

1C

2B 3A

4

Mill Race (except from Interstate
Highway 15 to the Provo City WWTP
discharge) and tributaries from
Utah Lake to headwaters

2B

3B

4

Mill Race from Interstate Highway 15 to the Provo City wastewater treatment plant discharge	2B	3B	4
Spring Creek and tributaries from Utah Lake (Provo Bay) to 50 feet upstream from the east boundary of the Industrial Parkway Road Right-of-way	2B	3B	4
Tributary to Spring Creek (Utah County) which receives the Springville City WWTP effluent from confluence with Spring Creek to headwaters	2B	3D	4
Spring Creek and tributaries from 50 feet upstream from the east boundary of the Industrial Parkway Road right-of-way to the headwaters	2B 3A		4
Ironton Canal from Utah Lake (Provo Bay) to the east boundary of the Denver and Rio Grande Western Railroad right-of-way	2B	3C	4
Ironton Canal from the east boundary of the Denver and Rio Grande Western Railroad right-of-way to the point of diversion from Spring Creek	2B 3A		4
Hobble Creek and tributaries, from Utah Lake to headwaters	2B 3A		4
Dry Creek and tributaries from Utah Lake (Provo Bay) to Highway-US 89	2B	3E	4
Dry Creek and tributaries from Highway-US 89 to headwaters	2B 3A		4
Spanish Fork River and tributaries, from Utah Lake to diversion at Moark Junction	2B	3B 3D	4
Spanish Fork River and tributaries, from diversion at Moark Junction to headwaters	2B 3A		4

Benjamin Slough and
tributaries from Utah Lake to
headwaters, except as listed
below

2B 3B 4

Beer Creek (Utah County) from
4850 West (in NE1/4NE1/4 sec.
36, T.8 S., R.1 E.) to
headwaters

2B 3C 4

Salt Creek, from Nephi diversion
to headwaters

2B 3A 4

Currant Creek, from mouth
of Goshen Canyon to Mona
Reservoir

2B 3A 4

Burrison Creek, from Mona
Reservoir to headwaters

2B 3A 4

Peteetneet Creek and tributaries,
from irrigation diversion above
Maple Dell to headwaters

2B 3A 4

Summit Creek and tributaries
(above Santaquin), from U.S.
National Forest boundary to
headwaters

2B 3A 4

All other permanent streams
entering Utah Lake

2B 3B 4

13.6 Sevier River Basin
a. Sevier River Drainage

TABLE

Sevier River and tributaries from
Sevier Lake to Gunnison Bend
Reservoir to U.S.National Forest
boundary except
as listed below

2B 3C 4

Beaver River and tributaries
from Minersville City to headwaters

2B 3A 4

Little Creek and tributaries,
From irrigation diversion to
Headwaters

2B 3A 4

Pinto Creek and tributaries,

From Newcastle Reservoir to Headwaters	2B 3A	4
Coal Creek and tributaries	2B 3A	4
Summit Creek and tributaries	2B 3A	4
Parowan Creek and tributaries	2B 3A	4
Tributaries to Sevier River from Sevier Lake to Gunnison Bend Reservoir from U.S. National Forest boundary to headwaters, including:		
Pioneer Creek and tributaries, Millard County	2B 3A	4
Chalk Creek and tributaries, Millard County	2B 3A	4
Meadow Creek and tributaries, Millard County	2B 3A	4
Corn Creek and tributaries, Millard County	2B 3A	4
Sevier River and tributaries below U.S. National Forest boundary from Gunnison Bend Reservoir to Annabella Diversion except <u>except</u> as listed below		2B 3B
4		
Oak Creek and tributaries, Millard County	2B 3A	4
Round Valley Creek and tributaries, Millard County	2B 3A	4
Judd Creek and tributaries, Juab County	2B 3A	4
Meadow Creek and tributaries, Juab County	2B 3A	4
Cherry Creek and tributaries Juab County	2B 3A	4
Tanner Creek and tributaries, Juab County	2B	3E 4

Baker Hot Springs, Juab County	2B	3D	4
Chicken Creek and tributaries, Juab County	2B 3A		4
San Pitch River and tributaries, from confluence with Sevier River to Highway U-132 crossing except As listed below:	2B	3C 3D	4
Twelve Mile Creek (South Creek) and tributaries, from U.S. Forest Service boundary to headwaters	2B 3A		4
Six Mile Creek and tributaries, Sanpete County	2B 3A		4
Manti Creek (South Creek) and tributaries, from U.S. Forest Service boundary to headwaters	2B 3A		4
Ephraim Creek (Cottonwood Creek) and tributaries, from U.S. Forest Service to headwaters	2B 3A		4
Oak Creek and tributaries, from U.S. Forest Service boundary near Spring City to headwaters	2B 3A		4
Fountain Green Creek and tributaries, from U.S. Forest Service boundary to headwaters	2B 3A		4
San Pitch River and tributaries, from Highway U-132 crossing to headwaters	2B 3A		4
Tributaries to Sevier River from Gunnison Bend Reservoir to Annabelle Diversion from U.S. National Forest boundary to headwaters	2B 3A		4

Sevier River and tributaries, from Annabella diversion to headwaters	2B 3A	4
Monroe Creek and tributaries, from diversion to headwaters	2B 3A	4
Little Creek and tributaries, from irrigation diversion to headwaters	2B 3A	4
Pinto Creek and tributaries, from Newcastle Reservoir to headwaters	2B 3A	4
Coal Creek and tributaries	2B 3A	4
Summit Creek and tributaries	2B 3A	4
Parowan Creek and tributaries	2B 3A	4
Duck Creek and tributaries	1C 2B 3A	4

13.7 Great Salt Lake Basin
a. Western Great Salt Lake Drainage

TABLE

Grouse Creek and tributaries, Box Elder County	2B 3A	4
Muddy Creek and tributaries, Box Elder County	2B 3A	4
Dove Creek and tributaries, Box Elder County	2B 3A	4
Pine Creek and tributaries, Box Elder County	2B 3A	4
Rock Creek and tributaries, Box Elder County	2B 3A	4
Fisher Creek and tributaries, Box Elder County	2B 3A	4
Dunn Creek and tributaries, Box Elder County	2B 3A	4
Indian Creek and tributaries,		

Box Elder County	2B 3A	4
Tenmile Creek and tributaries, Box Elder County	2B 3A	4
Curlew (Deep) Creek, Box Elder County	2B 3A	4
Blue Creek and tributaries, from Great Salt Lake to Blue Creek Reservoir	2B 3D	4
Blue Creek and tributaries, from Blue Creek Reservoir to headwaters	2B 3B	4
All perennial streams on the east slope of the Pilot Mountain Range	1C 2B 3A	4
Donner Creek and tributaries, from irrigation diversion to Utah-Nevada state line	2B 3A	4
Bettridge Creek and tributaries, from irrigation diversion to Utah-Nevada state line	2B 3A	4
North Willow Creek and tributaries, Tooele County	2B 3A	4
South Willow Creek and tributaries, Tooele County	2B 3A	4
Hickman Creek and tributaries, Tooele County	2B 3A	4
Barlow Creek and tributaries, Tooele County	2B 3A	4
Clover Creek and tributaries, Tooele County	2B 3A	4
Faust Creek and tributaries, Tooele County	2B 3A	4
Vernon Creek and tributaries, Tooele County	2B 3A	4
Ophir Creek and tributaries, Tooele County	2B 3A	4

Soldier Creek and Tributaries
from the Drinking Water Treatment
Facility Headwaters, Tooele
County

1C 2B 3A 4

Settlement Canyon Creek and
tributaries, Tooele County

2B 3A 4

Middle Canyon Creek and
tributaries, Tooele County

2B 3A 4

Tank Wash and tributaries,
Tooele County

2B 3A 4

Basin Creek and tributaries,
Juab and Tooele Counties

2B 3A 4

Thomas Creek and tributaries,
Juab County

2B 3A 4

Indian Farm Creek and
tributaries, Juab County

2B 3A 4

Cottonwood Creek and
tributaries, Juab County

2B 3A 4

Red Cedar Creek and tributaries,
Juab County

2B 3A 4

Granite Creek and tributaries,
Juab County

2B 3A 4

Trout Creek and tributaries,
Juab County

2B 3A 4

Birch Creek and tributaries,
Juab County

2B 3A 4

Deep Creek and tributaries,
from Rock Spring Creek to
headwaters, Juab and Tooele
Counties

2B 3A 4

Cold Spring, Juab County

2B 3C 3D

Cane Spring, Juab County

2B 3C 3D

Lake Creek, from Garrison
(Pruess) Reservoir to Nevada

4.46

state line	2B 3A	4
Snake Creek and tributaries, Millard County	2B 3B	4
Salt Marsh Spring Complex, Millard County	2B 3A	
Twin Springs, Millard County	2B 3B	
Tule Spring, Millard County	2B 3C 3D	
Coyote Spring Complex, Millard County	2B 3C 3D	
Hamblin Valley Wash and tributaries, from Nevada state line to headwaters (Beaver and Iron Counties)	2B 3D	4
Indian Creek and tributaries, Beaver County, from Indian Creek Reservoir to headwaters	2B 3A	4
Shoal Creek and tributaries, Iron County	2B 3A	4

b. Farmington Bay Drainage

TABLE

Corbett Creek and tributaries, from Highway to headwaters	2B 3A	4
Kays Creek and tributaries, from Farmington Bay to U.S. National Forest boundary	2B 3B	4
North Fork Kays Creek and tributaries, from U.S. National Forest boundary to headwaters	2B 3A	4
Middle Fork Kays Creek and tributaries, from U.S. National Forest boundary to headwaters	1C 2B 3A	4
South Fork Kays Creek and tributaries, from U.S. National Forest boundary to headwaters	1C 2B 3A	4

Snow Creek and tributaries	2B	3C	4
Holmes Creek and tributaries, from Farmington Bay to U.S. National Forest boundary	2B	3B	4
Holmes Creek and tributaries, from U.S. National Forest boundary to headwaters	1C	2B 3A	4
Baer Creek and tributaries, from Farmington Bay to Interstate Highway 15	2B	3C	4
Baer Creek and tributaries, from Interstate Highway 15 to Highway US-89	2B	3B	4
Baer Creek and tributaries, from Highway US-89 to headwaters	1C	2B 3A	4
Shepard Creek and tributaries, from U.S. National Forest boundary to headwaters	1C	2B 3A	4
Farmington Creek and tributaries, from Farmington Bay Waterfowl Management Area to U.S. National Forest boundary	2B	3B	4
Farmington Creek and tributaries, from U.S. National Forest boundary to headwaters	1C	2B 3A	4
Rudd Creek and tributaries, from Davis aqueduct to headwaters	2B 3A		4
Steed Creek and tributaries, from U.S. National Forest boundary to headwaters	1C	2B 3A	4
Davis Creek and tributaries, from Highway US-89 to headwaters	2B 3A		4
Lone Pine Creek and tributaries, from Highway US-89 to headwaters	2B 3A		4
Ricks Creek and tributaries, from Highway I-15 to headwaters	1C	2B 3A	4
Barnard Creek and tributaries,			

from Highway US-89 to headwaters		2B 3A	4
Parrish Creek and tributaries, from Davis Aqueduct to headwaters		2B 3A	4
Deuel Creek and tributaries, (Centerville Canyon) from Davis Aqueduct to headwaters		2B 3A	4
Stone Creek and tributaries, from Farmington Bay Waterfowl Management Area to U.S. National Forest boundary		2B 3A	4
Stone Creek and tributaries, from U.S. National Forest boundary to headwaters	1C	2B 3A	4
Barton Creek and tributaries, from U.S. National Forest boundary to headwaters		2B 3A	4
Mill Creek (Davis County) and tributaries, from confluence with State Canal to U.S. National Forest boundary		2B 3B	4
Mill Creek (Davis County) and tributaries, from U.S. National Forest boundary to headwaters	1C	2B 3A	4
North Canyon Creek and tributaries, from U.S. National Forest boundary to headwaters		2B 3A	4
Howard Slough		2B 3C	4
Hooper Slough		2B 3C	4
Willard Slough		2B 3C	4
Willard Creek to Headwaters	1C	2B 3A	4
Chicken Creek to Headwaters	1C	2B 3A	4
Cold Water Creek to Headwaters	1C	2B 3A	4
One House Creek to Headwaters	1C	2B 3A	4
Garner Creek to Headwaters	1C	2B 3A	4

13.8 Snake River Basin
a. Raft River Drainage (Box Elder County)

TABLE

Raft River and tributaries	2B 3A	4
Clear Creek and tributaries, from Utah-Idaho state line to headwaters	2B 3A	4
Onemile Creek and tributaries, from Utah-Idaho state line to headwaters	2B 3A	4
George Creek and tributaries, from Utah-Idaho state line to headwaters	2B 3A	4
Johnson Creek and tributaries, from Utah-Idaho state line to headwaters	2B 3A	4
Birch Creek and tributaries, from state line to headwaters	2B 3A	4
Pole Creek and tributaries, from state line to headwaters	2B 3A	4
Goose Creek and tributaries	2B 3A	4
Hardesty Creek and tributaries, from state line to headwaters	2B 3A	4
Meadow Creek and tributaries, from state line to headwaters	2B 3A	4

13.9 All irrigation canals and ditches statewide, except as
otherwise designated: 2B, 3E, 4

13.10 All drainage canals and ditches statewide, except as
otherwise designated: 2B, 3E

13.11 National Wildlife Refuges and State
Waterfowl Management Areas, and other Areas Associated with
the Great Salt Lake

TABLE

Bear River National Wildlife Refuge, Box Elder County	2B	3B	3D
--	----	----	----

Bear River Bay				
Open Water below approximately 4,208 ft.				5C
Transitional Waters approximately 4,208 ft. to Open Water				5E
Open Water above approximately 4,208 ft.	2B	3B	3D	
Brown's Park Waterfowl Management Area, Daggett County	2B	3A	3D	
Clear Lake Waterfowl Management Area, Millard County	2B		3C 3D	
Desert Lake Waterfowl Management Area, Emery County	2B		3C 3D	
Farmington Bay Waterfowl Management Area, Davis and Salt Lake Counties	2B		3C 3D	
Farmington Bay				
Open Water below approximately 4,208 ft.				5D
Transitional Waters approximately 4,208 ft. to Open Water				5E
Open Water above approximately 4,208 ft.	2B	3B	3D	
Fish Springs National Wildlife Refuge, Juab County	2B		3C 3D	
Harold Crane Waterfowl Management Area, Box Elder County	2B		3C 3D	
Gilbert Bay				
Open Water below approximately 4,208 ft.				5A
Transitional Waters approximately 4,208 ft. to Open Water				5E
Open Water above approximately 4,208 ft.	2B	3B	3D	
Gunnison Bay				
Open Water below approximately 4,208 ft.				5B
Transitional Waters approximately 4,208 ft. to Open Water				5E

Open Water above approximately 4,208 ft.	2B	3B	3D
Howard Slough Waterfowl Management Area, Weber County	2B	3C	3D
Locomotive Springs Waterfowl Management Area, Box Elder County	2B	3B	3D
Ogden Bay Waterfowl Management Area, Weber County	2B	3C	3D
Ouray National Wildlife Refuge, Uintah County	2B	3B	3D
Powell Slough Waterfowl Management Area, Utah County	2B	3C	3D
Public Shooting Grounds Waterfowl Management Area, Box Elder County	2B	3C	3D
Salt Creek Waterfowl Management Area, Box Elder County	2B	3C	3D
Stewart Lake Waterfowl Management Area, Uintah County	2B	3B	3D
Timpie Springs Waterfowl Management Area, Tooele County	2B	3B	3D

13.12 Lakes and Reservoirs. All lakes and any reservoirs greater than 10 acres not listed in 13.12 are assigned by default to the classification of the stream with which they are associated.

a. Beaver County

TABLE

Anderson Meadow Reservoir	2B 3A	4
Manderfield Reservoir	2B 3A	4
LaBaron Reservoir	2B 3A	4
Kent's Lake	2B 3A	4
Minersville Reservoir	2B 3A	3D 4
Puffer Lake	2B 3A	

Three Creeks Reservoir	2B 3A	4
------------------------	-------	---

b. Box Elder County

TABLE

Cutler Reservoir (including portion in Cache County)	2B 3B 3D	4
Etna Reservoir	2B 3A	4
Lynn Reservoir	2B 3A	4
Mantua Reservoir	2B 3A	4
Willard Bay Reservoir	1C 2A 2B 3B 3D	4

c. Cache County

TABLE

Hyrum Reservoir	2A 2B 3A**	4
Newton Reservoir	2B 3A	4
Porcupine Reservoir	2B 3A	4
Pelican Pond	2B 3B	4
Tony Grove Lake	2B 3A	4

Comment [C1]: These asterisks are strikethrough

d. Carbon County

TABLE

Grassy Trail Creek Reservoir	1C 2B 3A	4
Olsen Pond	2B 3B	4
Scofield Reservoir	1C 2B 3A	4

e. Daggett County

TABLE

Browne Reservoir	2B 3A	4
Daggett Lake	2B 3A	4
Flaming Gorge Reservoir (Utah		

portion)	1C 2A 2B 3A	4
Long Park Reservoir	1C 2B 3A	4
Sheep Creek Reservoir	2B 3A	4
Spirit Lake	2B 3A	4
Upper Potter Lake	2B 3A	4

f. Davis County

TABLE

Farmington Ponds	2B 3A	4
Kaysville Highway Ponds	2B 3A	4
Holmes Creek Reservoir	2B 3B	4

g. Duchesne County

TABLE

Allred Lake	2B 3A	4
Atwine Lake	2B 3A	4
Atwood Lake	2B 3A	4
Betsy Lake	2B 3A	4
Big Sandwash Reservoir	1C 2B 3A	4
Bluebell Lake	2B 3A	4
Brown Duck Reservoir	2B 3A	4
Butterfly Lake	2B 3A	4
Cedarview Reservoir	2B 3A	4
Chain Lake #1	2B 3A	4
Chepeta Lake	2B 3A	4
Clements Reservoir	2B 3A	4
Cleveland Lake	2B 3A	4

Cliff Lake	2B 3A	4
Continent Lake	2B 3A	4
Crater Lake	2B 3A	4
Crescent Lake	2B 3A	4
Daynes Lake	2B 3A	4
Dean Lake	2B 3A	4
Doll Lake	2B 3A	4
Drift Lake	2B 3A	4
Elbow Lake	2B 3A	4
Farmer's Lake	2B 3A	4
Fern Lake	2B 3A	4
Fish Hatchery Lake	2B 3A	4
Five Point Reservoir	2B 3A	4
Fox Lake Reservoir	2B 3A	4
Governor's Lake	2B 3A	4
Granddaddy Lake	2B 3A	4
Hoover Lake	2B 3A	4
Island Lake	2B 3A	4
Jean Lake	2B 3A	4
Jordan Lake	2B 3A	4
Kidney Lake	2B 3A	4
Kidney Lake West	2B 3A	4
Lily Lake	2B 3A	4
Midview Reservoir (Lake Boreham)	2B 3B	4
Milk Reservoir	2B 3A	4

4.55

Mirror Lake	2B 3A	4
Mohawk Lake	2B 3A	4
Moon Lake	1C 2A 2B 3A	4
North Star Lake	2B 3A	4
Palisade Lake	2B 3A	4
Pine Island Lake	2B 3A	4
Pinto Lake	2B 3A	4
Pole Creek Lake	2B 3A	4
Potter's Lake	2B 3A	4
Powell Lake	2B 3A	4
Pyramid Lake	2A 2B 3A	4
Queant Lake	2B 3A	4
Rainbow Lake	2B 3A	4
Red Creek Reservoir	2B 3A	4
Rudolph Lake	2B 3A	4
Scout Lake	2A 2B 3A	4
Spider Lake	2B 3A	4
Spirit Lake	2B 3A	4
Starvation Reservoir	1C 2A 2B 3A	4
Superior Lake	2B 3A	4
Swasey Hole Reservoir	2B 3A	4
Taylor Lake	2B 3A	4
Thompson Lake	2B 3A	4
Timothy Reservoir #1	2B 3A	4
Timothy Reservoir #6	2B 3A	4

Timothy Reservoir #7		2B 3A	4
Twin Pots Reservoir	1C	2B 3A	4
Upper Stillwater Reservoir	1C	2B 3A	4
X - 24 Lake		2B 3A	4

h. Emery County

TABLE

Cleveland Reservoir		2B 3A	4
Electric Lake		2B 3A	4
Huntington Reservoir		2B 3A	4
Huntington North Reservoir	2A	3B	4
Joe's Valley Reservoir	2A 2B	3A	4
Millsite Reservoir	1C 2A 2B	3A	4

i. Garfield County

TABLE

Barney Lake		2B 3A	4
Cyclone Lake		2B 3A	4
Deer Lake		2B 3A	4
Jacob's Valley Reservoir	2B	3C 3D	4
Lower Bowns Reservoir		2B 3A	4
North Creek Reservoir		2B 3A	4
Panguitch Lake		2B 3A	4
Pine Lake		2B 3A	4
Oak Creek Reservoir (Upper Bowns)		2B 3A	4
Pleasant Lake		2B 3A	4
Posey Lake		2B 3A	4

4.57

Purple Lake	2B 3A	4
Raft Lake	2B 3A	4
Row Lake #3	2B 3A	4
Row Lake #7	2B 3A	4
Spectacle Reservoir	2B 3A	4
Tropic Reservoir	2B 3A	4
West Deer Lake	2B 3A	4
Wide Hollow Reservoir	2B 3A	4

j. Iron County

TABLE

Newcastle Reservoir	2B 3A	4
Red Creek Reservoir	2B 3A	4
Yankee Meadow Reservoir	2B 3A	4

k. Juab County

TABLE

Chicken Creek Reservoir	2B	3C 3D	4
Mona Reservoir	2B	3B	4
Sevier Bridge (Yuba) Reservoir	2A 2B	3B	4

l. Kane County

TABLE

Navajo Lake	2B 3A	4
-------------	-------	---

m. Millard County

TABLE

DMAD Reservoir	2B	3B	4
Fools Creek Reservoir	2B	3C 3D	4

Garrison Reservoir (Pruess Lake)	2B	3B	4
Gunnison Bend Reservoir	2B	3B	4

n. Morgan County

TABLE

East Canyon Reservoir	1C	2A	2B	3A	4
Lost Creek Reservoir	1C		2B	3A	4

o. Piute County

TABLE

Barney Reservoir	2B	3A	4
Lower Boxcreek Reservoir	2B	3A	4
Manning Meadow Reservoir	2B	3A	4
Otter Creek Reservoir	2B	3A	4
Piute Reservoir	2B	3A	4
Upper Boxcreek Reservoir	2B	3A	4

p. Rich County

TABLE

Bear Lake (Utah portion)	2A	2B	3A	4
Birch Creek Reservoir		2B	3A	4
Little Creek Reservoir		2B	3A	4
Woodruff Creek Reservoir		2B	3A	4

q. Salt Lake County

TABLE

Decker Lake	2B	3B	3D	4
Lake Mary	1C	2B	3A	
Little Dell Reservoir	1C	2B	3A	

Mountain Dell Reservoir
r. San Juan County

1C 2B 3A

TABLE

Blanding Reservoir #4	1C	2B 3A	4
Dark Canyon Lake	1C	2B 3A	4
Ken's Lake		2B 3A**	4
Lake Powell (Utah portion)	1C 2A	2B 3B	4
Lloyd's Lake	1C	2B 3A	4
Monticello Lake		2B 3A	4
Recapture Reservoir		2B 3A	4

s. Sanpete County

TABLE

Duck Fork Reservoir		2B 3A	4
Fairview Lakes	1C	2B 3A	4
Ferron Reservoir		2B 3A	4
Lower Gooseberry Reservoir	1C	2B 3A	4
Gunnison Reservoir		2B 3C	4
Island Lake		2B 3A	4
Miller Flat Reservoir		2B 3A	4
Ninemile Reservoir		2B 3A	4
Palisade Reservoir	2A	2B 3A	4
Rolfson Reservoir		2B 3C	4
Twin Lakes		2B 3A	4
Willow Lake		2B 3A	4

t. Sevier County

4.60

TABLE

Annabella Reservoir	2B 3A	4
Big Lake	2B 3A	4
Farnsworth Lake	2B 3A	4
Fish Lake	2B 3A	4
Forsythe Reservoir	2B 3A	4
Johnson Valley Reservoir	2B 3A	4
Koosharem Reservoir	2B 3A	4
Lost Creek Reservoir	2B 3A	4
Redmond Lake	2B 3B	4
Rex Reservoir	2B 3A	4
Salina Reservoir	2B 3A	4
Sheep Valley Reservoir	2B 3A	4
u. Summit County		

TABLE

Abes Lake	2B 3A	4
Alexander Lake	2B 3A	4
Amethyst Lake	2B 3A	4
Beaver Lake	2B 3A	4
Beaver Meadow Reservoir	2B 3A	4
Big Elk Reservoir	2B 3A	4
Blanchard Lake	2B 3A	4
Bridger Lake	2B 3A	4
China Lake	2B 3A	4
Cliff Lake	2B 3A	4

Clyde Lake	2B 3A	4
Coffin Lake	2B 3A	4
Cuberant Lake	2B 3A	4
East Red Castle Lake	2B 3A	4
Echo Reservoir	1C 2A 2B 3A	4
Fish Lake	2B 3A	4
Fish Reservoir	2B 3A	4
Haystack Reservoir #1	2B 3A	4
Henry's Fork Reservoir	2B 3A	4
Hoop Lake	2B 3A	4
Island Lake	2B 3A	4
Island Reservoir	2B 3A	4
Jesson Lake	2B 3A	4
Kamas Lake	2B 3A	4
Lily Lake	2B 3A	4
Lost Reservoir	2B 3A	4
Lower Red Castle Lake	2B 3A	4
Lyman Lake	2A 2B 3A	4
Marsh Lake	2B 3A	4
Marshall Lake	2B 3A	4
McPheters Lake	2B 3A	4
Meadow Reservoir	2B 3A	4
Meeks Cabin Reservoir	2B 3A	4
Notch Mountain Reservoir	2B 3A	4
Red Castle Lake	2B 3A	4

Rockport Reservoir	1C 2A 2B 3A	4
Ryder Lake	2B 3A	4
Sand Reservoir	2B 3A	4
Scow Lake	2B 3A	4
Smith Moorehouse Reservoir	1C 2B 3A	4
Star Lake	2B 3A	4
Stateline Reservoir	2B 3A	4
Tamarack Lake	2B 3A	4
Trial Lake	1C 2B 3A	4
Upper Lyman Lake	2B 3A	4
Upper Red Castle	2B 3A	4
Wall Lake Reservoir	2B 3A	4
Washington Reservoir	2B 3A	4
Whitney Reservoir	2B 3A	4

v. Tooele County

TABLE

Blue Lake	2B 3B	4
Clear Lake	2B 3B	4
Grantsville Reservoir	2B 3A	4
Horseshoe Lake	2B 3B	4
Kanaka Lake	2B 3B	4
Rush Lake	2B 3B	
Settlement Canyon Reservoir	2B 3A	4
Stansbury Lake	2B 3B	4
Vernon Reservoir	2B 3A	4

w. Uintah County

TABLE

Ashley Twin Lakes (Ashley Creek)	1C	2B 3A	4
Bottle Hollow Reservoir		2B 3A	4
Brough Reservoir		2B 3A	4
Calder Reservoir		2B 3A	4
Crouse Reservoir		2B 3A	4
East Park Reservoir		2B 3A	4
Fish Lake		2B 3A	4
Goose Lake #2		2B 3A	4
Matt Warner Reservoir		2B 3A	4
Oaks Park Reservoir		2B 3A	4
Paradise Park Reservoir		2B 3A	4
Pelican Lake		2B 3B	4
Red Fleet Reservoir	1C 2A	2B 3A	4
Steinaker Reservoir	1C 2A	2B 3A	4
Towave Reservoir		2B 3A	4
Weaver Reservoir		2B 3A	4
Whiterocks Lake		2B 3A	4
Workman Lake		2B 3A	4

x. Utah County

TABLE

<u>Big East Lake</u>		2B 3A	4
Salem Pond	2A	3A	4
Silver Flat Lake Reservoir		2B 3A	4

Tibble Fork Reservoir	2B 3A	4
Utah Lake	2B 3B 3D	4

y. Wasatch County

TABLE

Currant Creek Reservoir	1C 2B 3A	4
Deer Creek Reservoir	1C 2A 2B 3A	4
Jordanelle Reservoir	1C 2A 3A	4
Mill Hollow Reservoir	2B 3A	4
Strawberry Reservoir	1C 2B 3A	4

z. Washington County

TABLE

Baker Dam Reservoir	2B 3A	4
Gunlock Reservoir	1C 2A 2B 3B	4
Ivins Reservoir	2B 3B	4
Kolob Reservoir	2B 3A	4
Lower Enterprise Reservoir	2B 3A	4
Quail Creek Reservoir	1C 2A 2B 3B	4
Sand Hollow Reservoir	1C 2A 3B	4
Upper Enterprise Reservoir	2B 3A	4

aa. Wayne County

TABLE

Blind Lake	2B 3A	4
Cook Lake	2B 3A	4
Donkey Reservoir	2B 3A	4
Fish Creek Reservoir	2B 3A	4

Mill Meadow Reservoir	2B 3A	4
Raft Lake	2B 3A	4
bb. Weber County		

TABLE

Causey Reservoir	2B 3A	4
Pineview Reservoir	1C 2A 2B 3A**	4

** Denotes site-specific temperature, see Table 2.14.2 Notes

13.13 Unclassified Waters

All waters not specifically classified are presumptively classified: 2B, 3D

R317-2-14. Numeric Criteria.

TABLE 2.14.1
NUMERIC CRITERIA FOR DOMESTIC,
RECREATION, AND AGRICULTURAL USES

Parameter	Domestic	Recreation and		Agri- culture
	Source 1C	Aesthetics 2A	2B	4
BACTERIOLOGICAL				
(30-DAY GEOMETRIC				
MEAN) (NO.)/100 ML) (7)				
E. coli	206	126	206	
MAXIMUM				
(NO.)/100 ML) (7)				
E. coli	668	409	668	
PHYSICAL				
pH (RANGE)	6.5-9.0	6.5-9.0	6.5-9.0	6.5-9.0
Turbidity Increase				
(NTU)		10	10	
METALS (DISSOLVED, MAXIMUM				
MG/L) (2)				
Arsenic	0.01			0.1
Barium	1.0			
Beryllium	<0.004			
Cadmium	0.01			0.01
Chromium	0.05			0.10
Copper				0.2
Lead	0.015			0.1
Mercury	0.002			

Selenium	0.05	0.05
Silver	0.05	

INORGANICS
(MAXIMUM MG/L)

Bromate	0.01	
Boron		0.75
Chlorite	<1.0	
Fluoride (3)	1.4-2.4	
Nitrates as N	10	
Total Dissolved Solids (4)		1200

RADIOLOGICAL

(MAXIMUM pCi/L)		
Gross Alpha	15	15
Gross Beta (Combined)	4 mrem/yr	Radium 226, 228
Strontium 90	5	
Tritium	8	
Uranium	20000	
	3.0	

ORGANICS
(MAXIMUM UG/L)

Chlorophenoxy Herbicides	
2,4-D	70
2,4,5-TP	10
Methoxychlor	40

POLLUTION
INDICATORS (5)

BOD (MG/L)	5	5	5
Nitrate as N (MG/L)	4	4	
Total Phosphorus as P (MG/L) (6)	0.05	0.05	

FOOTNOTES:

- (1) Reserved
- (2) The dissolved metals method involves filtration of the sample in the field, acidification of the sample in the field, no digestion process in the laboratory, and analysis by approved laboratory methods for the required detection levels.
- (3) Maximum concentration varies according to the daily maximum mean air temperature.

TEMP (C)	MG/L
12.0	2.4

12.1-14.6	2.2
14.7-17.6	2.0
17.7-21.4	1.8
21.5-26.2	1.6
26.3-32.5	1.4

(4) ~~Reserved Site specific criteria for total dissolved solids may be adopted by rulemaking where it is demonstrated that: (a) a less stringent criterion is appropriate because of natural or unalterable conditions; or (b) a less stringent, site specific criterion and/or date specified criterion is protective of existing and attainable agricultural uses; or (c) a more stringent criterion is attainable and necessary for the protection of sensitive crops. For water quality assessment purposes, up to 10% of representative samples may exceed the standard.~~

SITE SPECIFIC STANDARDS FOR TOTAL DISSOLVED SOLIDS (TDS)

Castle Creek from confluence with the Colorado River to Seventh Day Adventist Diversion: 1,800 mg/l;

Cottonwood Creek from the confluence with Huntington Creek to I-57:
3,500 mg/l;

Ferron Creek from the confluence with San Rafael River to Highway 10:
3,500 mg/l;

Huntington Creek and tributaries from the confluence with Cottonwood Creek to U-10: 4,800 mg/l;

Ivie Creek and its tributaries from the confluence with Muddy Creek to the confluence with Quitchupah Creek:
3,800 mg/l provided that total sulfate not exceed 2,000 mg/l to protect the livestock watering agricultural existing use;

Ivie Creek and its tributaries from the confluence with Quitchupah Creek to U10: 2,600 mg/l;

Lost Creek from the confluence with Sevier River to U.S. Forest Service Boundary: 4,600 mg/l;

Muddy Creek and tributaries from the confluence with Ivie Creek to U-10: 2,600 mg/l;

Muddy Creek from confluence with Fremont River to confluence with Ivie Creek: 5,800 mg/l;

North Creek from the confluence with Virgin River to headwaters: 2,035 mg/l;

Onion Creek from the confluence with Colorado River to road crossing above Stinking Springs: 3000 mg/l;

Brine Creek-Petersen Creek, from the confluence with the Sevier River to U-119 Crossing: 9,700 mg/l;

Price River and tributaries from confluence with Green River to confluence with ~~Coal~~ Soldier Creek: 3,000 mg/l;

Price River and tributaries from the confluence with ~~Coal Creek~~ Soldier Creek to Carbon Canal Diversion: 1,700 mg/l

Quitcupah Creek from the confluence with Ivie Creek to U-10: 3,800 mg/l provided that total sulfate not exceed 2,000 mg/l to protect the livestock watering agricultural existing use;

Rock Canyon Creek from the confluence with Cottonwood Creek to headwaters: 3,500 mg/l;

San Pitch River from below Gunnison Reservoir to the Sevier River: 2,400 mg/l;

San Rafael River from the confluence with the Green River to Buckhorn Crossing: 4,100 mg/l;

San Rafael River from the Buckhorn Crossing to the confluence with Huntington Creek and Cottonwood Creek: 3,500 mg/l;

~~Sevier River between Gunnison Bend Reservoir and DMAD Reservoir:~~
1,725 mg/l;

Sevier River from Gunnison Bend Reservoir to Clear Lake: 3,370 mg/l;

South Fork Spring Creek from confluence with Pelican Pond Slough Stream to US 89
1,450 mg/l (Apr.-Sept.)
1,950 mg/l (Oct.-March)

Virgin River from the Utah/Arizona border to Pah Tempe Springs:

2,360 mg/l

(5) Investigations should be conducted to develop more information where these pollution indicator levels are exceeded.

(6) Total Phosphorus as P (mg/l) indicator for lakes and reservoirs shall be 0.025.

(7) Where the criteria are exceeded and there is a reasonable basis for concluding that the indicator bacteria E. coli are primarily from natural sources (wildlife), e.g., in National Wildlife Refuges and State Waterfowl Management Areas, the criteria

may be considered attained provided the density attributable to non-wildlife sources is less than the criteria. Exceedences of E. coli from nonhuman nonpoint sources will generally be addressed through appropriate Federal, State, and local nonpoint source programs.

Measurement of E. coli using the "Quanti-Tray 2000" procedure is approved as a field analysis. Other EPA approved methods may also be used.

For water quality assessment purposes, up to 10% of representative samples may exceed the 668 per 100 ml criterion (for 1C and 2B waters) and 409 per 100 ml (for 2A waters). For small datasets, where exceedences of these criteria are observed, follow-up ambient monitoring should be conducted to better characterize water quality.

TABLE 2.14.2
NUMERIC CRITERIA FOR AQUATIC WILDLIFE(8)

Parameter	Aquatic Wildlife				
	3A	3B	3C	3D	5
PHYSICAL					
Total Dissolved Gases	(1)	(1)			
Minimum Dissolved Oxygen (MG/L) (2) (2a)					
30 Day Average	6.5	5.5	5.0	5.0	
7 Day Average	9.5/5.0	6.0/4.0			
Minimum	8.0/4.0	5.0/3.0	3.0	3.0	
Max. Temperature(C) (3)	20	27	27		
Max. Temperature Change (C) (3)	2	4	4		
pH (Range) (2a)	6.5-9.0	6.5-9.0	6.5-9.0	6.5-9.0	

Turbidity Increase (NTU)	10	10	15	15
METALS (4)				
(DISSOLVED, UG/L) (5)				
Aluminum				
4 Day Average (6)	87	87	87	87
1 Hour Average	750	750	750	750
Arsenic (Trivalent)				
4 Day Average	150	150	150	150
1 Hour Average	340	340	340	340
Cadmium (7)				
4 Day Average	0.25	0.25	0.25	0.25
1 Hour Average	2.0	2.0	2.0	2.0
Chromium (Hexavalent)				
4 Day Average	11	11	11	11
1 Hour Average	16	16	16	16
Chromium (Trivalent) (7)				
4 Day Average	74	74	74	74
1 Hour Average	570	570	570	570
Copper (7)				
4 Day Average	9	9	9	9
1 Hour Average	13	13	13	13
Cyanide (Free)				
4 Day Average	5.2	5.2	5.2	
1 Hour Average	22	22	22	22
Iron (Maximum)	1000	1000	1000	1000
Lead (7)				
4 Day Average	2.5	2.5	2.5	2.5
1 Hour Average	65	65	65	65
Mercury				
4 Day Average	0.012	0.012	0.012	0.012
1 Hour Average	2.4	2.4	2.4	2.4
Nickel (7)				
4 Day Average	52	52	52	52
1 Hour Average	468	468	468	468
Selenium				
4 Day Average	4.6	4.6	4.6	4.6

1 Hour Average	18.4	18.4	18.4	18.4
----------------	------	------	------	------

Selenium (14)

Gilbert Bay (Class 5A)

Great Salt Lake

Geometric Mean over

Nesting Season (mg/kg dry wt)				12.5
-------------------------------	--	--	--	------

Silver

1 Hour Average (7)	1.6	1.6	1.6	1.6
--------------------	-----	-----	-----	-----

~~Tributyl-Tin~~ Tributyltin

4 Day Average	0.072	0.072	0.072	0.072
---------------	-------	-------	-------	-------

1 Hour Average	0.46	0.46	0.46	0.46
----------------	------	------	------	------

Zinc (7)

4 Day Average	120	120	120	120
---------------	-----	-----	-----	-----

1 Hour Average	120	120	120	120
----------------	-----	-----	-----	-----

INORGANICS

(MG/L) (4)

Total Ammonia as N (9)

30 Day Average	(9a)	(9a)	(9a)	(9a)
----------------	------	------	------	------

1 Hour Average	(9b)	(9b)	(9b)	(9b)
----------------	------	------	------	------

Chlorine (Total
Residual)

4 Day Average	0.011	0.011	0.011	0.011
---------------	-------	-------	-------	-------

1 Hour Average	0.019	0.019	0.019	0.019
----------------	-------	-------	-------	-------

Hydrogen Sulfide (13)

(Undissociated,

Max. UG/L)	2.0	2.0	2.0	2.0
------------	-----	-----	-----	-----

Phenol (Maximum)	0.01	0.01	0.01	0.01
------------------	------	------	------	------

RADIOLOGICAL (MAXIMUM pCi/L)

Gross Alpha (10)	15	15	15	15
------------------	----	----	----	----

ORGANICS (UG/L) (4)

Acrolein

4 Day Average	3.0	3.0	3.0	3.0
---------------	-----	-----	-----	-----

1 Hour Average	3.0	3.0	3.0	3.0
----------------	-----	-----	-----	-----

Aldrin

1 Hour Average	1.5	1.5	1.5	1.5
----------------	-----	-----	-----	-----

Chlordane

4 Day Average	0.0043	0.0043	0.0043	0.0043
---------------	--------	--------	--------	--------

1 Hour Average	1.2	1.2	1.2	1.2
----------------	-----	-----	-----	-----

Chlorpyrifos

4 Day Average	0.041	0.041	0.041	0.041
1 Hour Average	0.083	0.083	0.083	0.083

4,4' -DDT

4 Day Average	0.0010	0.0010	0.0010	0.0010
1 Hour Average	0.55	0.55	0.55	0.55

Diazinon

4 Day Average	0.17	0.17	0.17	0.17
1 Hour Average	0.17	0.17	0.17	0.17

Dieldrin

4 Day Average	0.056	0.056	0.056	0.056
1 Hour Average	0.24	0.24	0.24	0.24

Alpha-Endosulfan

4 Day Average	0.056	0.056	0.056	0.056
1 Hour Average	0.11	0.11	0.11	0.11

beta-Endosulfan

4 Day Average	0.056	0.056	0.056	0.056
1 Day Average	0.11	0.11	0.11	0.11

Endrin

4 Day Average	0.036	0.036	0.036	0.036
1 Hour Average	0.086	0.086	0.086	0.086

Heptachlor

4 Day Average	0.0038	0.0038	0.0038	0.0038
1 Hour Average	0.26	0.26	0.26	0.26

Heptachlor epoxide

4 Day Average	0.0038	0.0038	0.0038	0.0038
1 Hour Average	0.26	0.26	0.26	0.26

Hexachlorocyclohexane
(Lindane)

4 Day Average	0.08	0.08	0.08	0.08
1 Hour Average	1.0	1.0	1.0	1.0

Methoxychlor

(Maximum)	0.03	0.03	0.03	0.03
-----------	------	------	------	------

Mirex (Maximum)	0.001	0.001	0.001	0.001
-----------------	-------	-------	-------	-------

Nonylphenol

4 Day Average	6.6	6.6	6.6	6.6
1 Hour Average	28.0	28.0	28.0	28.0

Parathion

4 Day Average	0.013	0.013	0.013	0.013
1 Hour Average	0.066	0.066	0.066	0.066
PCB's				
4 Day Average	0.014	0.014	0.014	0.014
Pentachlorophenol (11)				
4 Day Average	15	15	15	15
1 Hour Average	19	19	19	19
Toxaphene				
4 Day Average	0.0002	0.0002	0.0002	0.0002
1 Hour Average	0.73	0.73	0.73	0.73
POLLUTION				
INDICATORS (11)				
Gross Beta (pCi/L)	50	50	50	50
BOD (MG/L)	5	5	5	5
Nitrate as N (MG/L)	4	4	4	
Total Phosphorus as P (MG/L) (12)	0.05	0.05		

FOOTNOTES:

(1) Not to exceed 110% of saturation.

(2) These limits are not applicable to lower water levels in deep impoundments. First number in column is for when early life stages are present, second number is for when all other life stages present.

(2a) These criteria are not applicable to Great Salt Lake impounded wetlands. Surface water in these wetlands shall be protected from changes in pH and dissolved oxygen that create significant adverse impacts to the existing beneficial uses. To ensure protection of uses, the Executive Secretary shall develop reasonable protocols and guidelines that quantify the physical, chemical, and biological integrity of these waters. These protocols and guidelines will include input from local governments, the regulated community, and the general public. The Executive Secretary will inform the Water Quality Board of any protocols or guidelines that are developed.

(3) ~~The temperature standard shall be at background where it can be shown that natural or unalterable conditions prevent its attainment. In such cases rulemaking will be undertaken to modify the standard accordingly.~~

Site Specific Standards for Temperature

Ken's Lake: From June 1st - September 20th, 27 degrees C.

(4) Where criteria are listed as 4-day average and 1-hour average concentrations, these concentrations should not be exceeded more often than once every three years on the average.

(5) The dissolved metals method involves filtration of

the sample in the field, acidification of the sample in the field, no digestion process in the laboratory, and analysis by EPA approved laboratory methods for the required detection levels.

(6) The criterion for aluminum will be implemented as follows:

Where the pH is equal to or greater than 7.0 and the hardness is equal to or greater than 50 ppm as CaCO₃ in the receiving water after mixing, the 87 ug/l chronic criterion (expressed as total recoverable) will not apply, and aluminum will be regulated based on compliance with the 750 ug/l acute aluminum criterion (expressed as total recoverable).

(7) Hardness dependent criteria. 100 mg/l used. Conversion factors for ratio of total recoverable metals to dissolved metals must also be applied. In waters with a hardness greater than 400 mg/l as CaCO₃, calculations will assume a hardness of 400 mg/l as CaCO₃. See Table 2.14.3 for complete equations for hardness and conversion factors.

(8) Reserved

(9) The following equations are used to calculate Ammonia criteria concentrations:

(9a) The thirty-day average concentration of total ammonia nitrogen (in mg/l as N) does not exceed, more than once every three years on the average, the chronic criterion calculated using the following equations.

Fish Early Life Stages are Present:

$$\text{mg/l as N (Chronic)} = ((0.0577 / (1 + 10^{7.688 - \text{pH}})) + (2.487 / (1 + 10^{0.028 * (25 - T)}))) * \text{MIN}(2.85, 1.45 * 10^{0.028 * (25 - T)})$$

Fish Early Life Stages are Absent:

$$\text{mg/l as N (Chronic)} = ((0.0577 / (1 + 10^{7.688 - \text{pH}})) + (2.487 / (1 + 10^{0.028 * (25 - \text{MAX}(T, 7))}))) * 1.45 * 10^{0.028 * (25 - \text{MAX}(T, 7))}$$

(9b) The one-hour average concentration of total ammonia nitrogen (in mg/l as N) does not exceed, more than once every three years on the average the acute criterion calculated using the following equations.

Class 3A:

$$\text{mg/l as N (Acute)} = (0.275 / (1 + 10^{7.204 - \text{pH}})) + (39.0 / (1 + 10^{0.028 * (25 - T)}))$$

Class 3B, 3C, 3D:

$$\text{mg/l as N (Acute)} = 0.411 / (1 + 10^{7.204 - \text{pH}}) + (58.4 / (1 + 10^{0.028 * (25 - T)}))$$

In addition, the highest four-day average within the 30-day period should not exceed 2.5 times the chronic criterion.

The "Fish Early Life Stages are Present" 30-day average total ammonia criterion will be applied by default unless it is determined by the Division, on a site-specific basis, that it is appropriate to apply the "Fish Early Life Stages are Absent" 30-day average criterion for all or some portion of the year. At a minimum, the "Fish Early Life Stages are Present" criterion will apply from the beginning of spawning through the end of the early life stages. Early life stages

include the pre-hatch embryonic stage, the post-hatch free embryo or yolk-sac fry stage, and the larval stage for the species of fish expected to occur at the site. The division will consult with the Division of Wildlife Resources in making such determinations. The Division will maintain information regarding the waterbodies and time periods where application of the "Early Life Stages are Absent" criterion is determined to be appropriate.

(10) Investigation should be conducted to develop more information where these levels are exceeded.

(11) pH dependent criteria. pH 7.8 used in table. See Table 2.14.4 for equation.

(12) Total Phosphorus as P (mg/l) as a pollution indicator for lakes and reservoirs shall be 0.025.

(13) Formula to convert dissolved sulfide to un-disassociated hydrogen sulfide is: $H_2S = \text{Dissolved Sulfide} * e^{(-1.92 + pH) + 12.05}$

(14) The selenium water quality standard of 12.5 (mg/kg dry weight) for Gilbert Bay is a tissue based standard using the complete egg/embryo of aquatic dependent birds using Gilbert Bay based upon a minimum of five samples over the nesting season. Assessment procedures are incorporated as a part of this standard as follows:

Egg Concentration Triggers: DWQ Responses

Below 5.0 mg/kg: Routine monitoring with sufficient intensity to determine if selenium concentrations within the Great Salt Lake ecosystem are increasing.

5.0 mg/kg: Increased monitoring to address data gaps, loadings, and areas of uncertainty identified from initial Great Salt Lake selenium studies.

6.4 mg/kg: Initiation of a Level II Antidegradation review by the State for all discharge permit renewals or new discharge permits to Great Salt Lake. The Level II Antidegradation review may include an analysis of loading reductions.

9.8 mg/kg: Initiation of preliminary TMDL studies to evaluate selenium loading sources.

12.5 mg/kg and above: Declare impairment. Formalize and implement TMDL.

Antidegradation

Level II Review procedures associated with this standard are referenced at R317-2-3.5.C.

TABLE

67

4.76

1-HOUR AVERAGE (ACUTE) CONCENTRATION OF
TOTAL AMMONIA AS N (MG/L)

pH	Class 3A	Class 3B, 3C, 3D
6.5	32.6	48.8
6.6	31.3	46.8
6.7	29.8	44.6
6.8	28.1	42.0
6.9	26.2	39.1
7.0	24.1	36.1
7.1	22.0	32.8
7.2	19.7	29.5
7.3	17.5	26.2
7.4	15.4	23.0
7.5	13.3	19.9
7.6	11.4	17.0
7.7	9.65	14.4
7.8	8.11	12.1
7.9	6.77	10.1
8.0	5.62	8.40
8.1	4.64	6.95
8.2	3.83	5.72
8.3	3.15	4.71
8.4	2.59	3.88
8.5	2.14	3.20
8.6	1.77	2.65
8.7	1.47	2.20
8.8	1.23	1.84
8.9	1.04	1.56
9.0	0.89	1.32

TABLE
30-DAY AVERAGE (CHRONIC) CONCENTRATION OF
TOTAL AMMONIA AS N (MG/L)

Fish Early Life Stages Present											
pH	Temperature, C										
	0	14	16	18	20	22	24	26	28	30	
6.5	6.67	6.67	6.06	5.33	4.68	4.12	3.62	3.18	2.80	2.46	
6.6	6.57	6.57	5.97	5.25	4.61	4.05	3.56	3.13	2.75	2.42	
6.7	6.44	6.44	5.86	5.15	4.52	3.98	3.50	3.07	2.70	2.37	
6.8	6.29	6.29	5.72	5.03	4.42	3.89	3.42	3.00	2.64	2.32	
6.9	6.12	6.12	5.56	4.89	4.30	3.78	3.32	2.92	2.57	2.25	
7.0	5.91	5.91	5.37	4.72	4.15	3.65	3.21	2.82	2.48	2.18	
7.1	5.67	5.67	5.15	4.53	3.98	3.50	3.08	2.70	2.38	2.09	
7.2	5.39	5.39	4.90	4.31	3.78	3.33	2.92	2.57	2.26	1.99	
7.3	5.08	5.08	4.61	4.06	3.57	3.13	2.76	2.42	2.13	1.87	
7.4	4.73	4.73	4.30	3.78	3.32	2.92	2.57	2.26	1.98	1.74	
7.5	4.36	4.36	3.97	3.49	3.06	2.69	2.37	2.08	1.83	1.61	

4.77

7.6	3.98	3.98	3.61	3.18	2.79	2.45	2.16	1.90	1.67	1.47
7.7	3.58	3.58	3.25	2.86	2.51	2.21	1.94	1.71	1.50	1.32
7.8	3.18	3.18	2.89	2.54	2.23	1.96	1.73	1.52	1.33	1.17
7.9	2.80	2.80	2.54	2.24	1.96	1.73	1.52	1.33	1.17	1.03
8.0	2.43	2.43	2.21	1.94	1.71	1.50	1.32	1.16	1.02	0.90
8.1	2.10	2.10	1.91	1.68	1.47	1.29	1.14	1.00	0.88	0.77
8.2	1.79	1.79	1.63	1.43	1.26	1.11	0.97	0.86	0.75	0.66
8.3	1.52	1.52	1.39	1.22	1.07	0.94	0.83	0.73	0.64	0.56
8.4	1.29	1.29	1.17	1.03	0.91	0.80	0.70	0.62	0.54	0.48
8.5	1.09	1.09	0.99	0.87	0.76	0.67	0.59	0.52	0.46	0.40
8.6	0.92	0.92	0.84	0.73	0.65	0.57	0.50	0.44	0.39	0.34
8.7	0.78	0.78	0.71	0.62	0.55	0.48	0.42	0.37	0.33	0.29
8.8	0.66	0.66	0.60	0.53	0.46	0.41	0.36	0.32	0.28	0.24
8.9	0.56	0.56	0.51	0.45	0.40	0.35	0.31	0.27	0.24	0.21
9.0	0.49	0.49	0.44	0.39	0.34	0.30	0.26	0.23	0.20	0.18

TABLE
30-DAY AVERAGE (CHRONIC) CONCENTRATION OF
TOTAL AMMONIA AS N (MG/L)

pH	Fish Early Life Stages Absent Temperature, C									
	0-7	8	9	10	11	12	13	14	16	
6.5	10.8	10.1	9.51	8.92	8.36	7.84	7.36	6.89	6.06	
6.6	10.7	10.1	9.37	8.37	8.79	8.24	7.72	7.24	6.36	
6.7	10.5	9.99	9.20	8.62	8.08	7.58	7.11	6.66	5.86	
6.8	10.2	9.81	8.98	8.42	7.90	7.40	6.94	6.51	5.72	
6.9	9.93	9.31	8.73	8.19	7.68	7.20	6.75	6.33	5.56	
7.0	9.60	9.00	8.43	7.91	7.41	6.95	6.52	6.11	5.37	
7.1	9.20	8.63	8.09	7.58	7.11	6.67	6.25	5.86	5.15	
7.2	8.75	8.20	7.69	7.21	6.76	6.34	5.94	5.57	4.90	
7.3	8.24	7.73	7.25	6.79	6.37	5.97	5.60	5.25	4.61	
7.4	7.69	7.21	6.76	6.33	5.94	5.57	5.22	4.89	4.30	
7.5	7.09	6.64	6.23	5.84	5.48	5.13	4.81	4.51	3.97	
7.6	6.46	6.05	5.67	5.32	4.99	4.68	4.38	4.11	3.61	
7.7	5.81	5.45	5.11	4.79	4.49	4.21	3.95	3.70	3.25	
7.8	5.17	4.84	4.54	4.26	3.99	3.74	3.51	3.29	2.89	
7.9	4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89	2.54	
8.0	3.95	3.70	3.47	3.26	3.05	2.86	2.68	2.52	2.21	
8.1	3.41	3.19	2.99	2.81	2.63	2.47	2.31	2.17	1.91	
8.2	2.91	2.73	2.56	2.40	2.25	2.11	1.98	1.85	1.63	
8.3	2.47	2.32	2.18	2.04	1.91	1.79	1.68	1.58	1.39	
8.4	2.09	1.96	1.84	1.73	1.62	1.52	1.42	1.33	1.17	
8.5	1.77	1.66	1.55	1.46	1.37	1.28	1.20	1.13	0.990	
8.6	1.49	1.40	1.31	1.23	1.15	1.08	1.01	0.951	0.836	
8.7	1.26	1.18	1.11	1.04	0.976	0.915	0.858	0.805	0.707	
8.8	1.07	1.01	0.944	0.885	0.829	0.778	0.729	0.684	0.601	
8.9	0.917	0.860	0.806	0.758	0.709	0.664	0.623	0.584	0.513	
9.0	0.790	0.740	.694	0.651	0.610	0.572	0.536	0.503	0.442	

4.78

pH	18	20	22	24	26	28	30
6.5	5.33	4.68	4.12	3.62	3.18	2.80	2.46
6.6	5.25	4.61	4.05	3.56	3.13	2.75	2.42
6.7	5.15	4.52	3.98	3.50	3.07	2.70	2.37
6.8	5.03	4.42	3.89	3.42	3.00	2.64	2.32
6.9	4.89	4.30	3.78	3.32	2.92	2.57	2.25
7.0	4.72	4.15	3.65	3.21	2.82	2.48	2.18
7.1	4.53	3.98	3.50	3.08	2.70	2.38	2.09
7.2	4.41	3.78	3.33	2.92	2.57	2.26	1.99
7.3	4.06	3.57	3.13	2.76	2.42	2.13	1.87
7.4	3.78	3.32	2.92	2.57	2.26	1.98	1.74
7.5	3.49	3.06	2.69	2.37	2.08	1.83	1.61
7.6	3.18	2.79	2.45	2.16	1.90	1.67	1.47
7.7	2.86	2.51	2.21	1.94	1.71	1.50	1.32
7.8	2.54	2.23	1.96	1.73	1.52	1.33	1.17
7.9	2.24	1.96	1.73	1.52	1.33	1.17	1.03
8.0	0.94	1.71	1.50	1.32	1.16	1.02	0.897
8.1	0.68	1.47	1.29	1.14	1.00	0.879	0.733
8.2	0.43	1.26	1.11	0.073	0.855	0.752	0.661
8.3	0.22	1.07	0.941	0.827	0.727	0.639	0.562
8.4	0.03	0.906	0.796	0.700	0.615	0.541	0.475
8.5	0.870	0.765	0.672	0.591	0.520	0.457	0.401
8.6	0.735	0.646	0.568	0.499	0.439	0.396	0.339
8.7	0.622	0.547	0.480	0.422	0.371	0.326	0.287
8.8	0.528	0.464	0.408	0.359	0.315	0.277	0.244
8.9	0.451	0.397	0.349	0.306	0.269	0.237	0.208
9.0	0.389	0.342	0.300	0.264	0.232	0.204	0.179

TABLE 2.14.3a

EQUATIONS TO CONVERT TOTAL RECOVERABLE METALS STANDARD
WITH HARDNESS (1) DEPENDENCE TO DISSOLVED METALS STANDARD
BY APPLICATION OF A CONVERSION FACTOR (CF).

Parameter 4-Day Average (Chronic)
Concentration (UG/L)

CADMIUM $CF * e^{(0.7409 \ln(\text{hardness}) - 4.719)}$
 $CF = 1.101672 - \ln(\text{hardness}) (0.041838)$

CHROMIUM III $CF * e^{(0.8190 \ln(\text{hardness}) + 0.6848)}$
 $CF = 0.860$

COPPER $CF * e^{(0.8545 \ln(\text{hardness}) - 1.702)}$
 $CF = 0.960$

LEAD $CF * e^{(1.273 \ln(\text{hardness}) - 4.705)}$

$CF = 1.46203 - \ln(\text{hardness}) (0.145712)$
 NICKEL $CF * e^{(0.8460(\ln(\text{hardness})) + 0.0584)}$
 $CF = 0.997$
 SILVER N/A
 ZINC $CF * e^{(0.8473(\ln(\text{hardness})) + 0.884)}$ $CF = 0.986$

TABLE 2.14.3b

EQUATIONS TO CONVERT TOTAL RECOVERABLE METALS STANDARD
WITH HARDNESS (1) DEPENDENCE TO DISSOLVED METALS STANDARD
BY APPLICATION OF A CONVERSION FACTOR (CF).

Parameter	1-Hour Average (Acute) Concentration (UG/L)
CADMIUM	$CF * e^{(1.0166(\ln(\text{hardness})) - 3.924)}$ $CF = 1.136672 - \ln(\text{hardness}) (0.041838)$
CHROMIUM (III)	$CF * e^{(0.8190(\ln(\text{hardness})) + 3.7256)}$ $CF = 0.316$
COPPER	$CF * e^{(0.9422(\ln(\text{hardness})) - 1.700)}$ $CF = 0.960$
LEAD	$CF * e^{(1.273(\ln(\text{hardness})) - 1.460)}$ $CF = 1.46203 - \ln(\text{hardness}) (0.145712)$
NICKEL	$CF * e^{(0.8460(\ln(\text{hardness})) + 2.255)}$ $CF = 0.998$
SILVER	$CF * e^{(1.72(\ln(\text{hardness})) - 6.59)}$ $CF = 0.85$
ZINC	$CF * e^{(0.8473(\ln(\text{hardness})) + 0.884)}$ $CF = 0.978$

FOOTNOTE:

(1) Hardness as mg/l $CaCO_3$.

TABLE 2.14.4
EQUATIONS FOR PENTACHLOROPHENOL
(pH DEPENDENT)

4-Day Average (Chronic) Concentration (UG/L)	1-Hour Average (Acute) Concentration (UG/L)
---	--

TABLE 2.14.5
SITE SPECIFIC CRITERIA FOR
DISSOLVED OXYGEN FOR JORDAN RIVER, SURPLUS CANAL, AND STATE CANAL
(SEE SECTION 2.13)

DISSOLVED OXYGEN:

May-July

7-day average	5.5 mg/l
30-day average	5.5 mg/l
Instantaneous minimum	4.5 mg/l

August-April

30-day average	5.5 mg/l
Instantaneous minimum	4.0 mg/l

TABLE 2.14.6
LIST OF HUMAN HEALTH CRITERIA (CONSUMPTION)

Chemical Parameter	Water and Organism (ug/L) Class 1C	Organism Only (ug/L) Class 3A,3B,3C,3D
Antimony	5.6	640
Arsenic	A	A
Beryllium	C	C
Cadmium	C	C
Chromium III	C	C
Chromium VI	C	C
Copper	1,300	
Lead	C	C
Mercury	A	A
Nickel	100 MCL	4,600
Selenium	A	4,200
Silver		
Thallium	0.24	0.47
Zinc	7,400	26,000
Cyanide	140	140
Asbestos	7 million Fibers/L	
2,3,7,8-TCDD Dioxin	5.0 E -9 B	5.1 E-9 B
Acrolein	1906.0	2909.0
Acrylonitrile	0.051 B	0.25 B
Alachlor	2.0	
Atrazine	3.0	
Benzene	2.2 B	51 B
Bromoform	4.3 B	140 B
Carbofuran	40	

Carbon Tetrachloride	0.23 B	1.6 B
Chlorobenzene	100 MCL	1,600
Chlorodibromomethane	0.40 B	13 B
Chloroethane		
2-Chloroethylvinyl Ether		
Chloroform	5.7 B	470 B
Dalapon	200	
Di(2ethylhexyl)adipate	400	
Dibromochloropropane	0.2	
Dichlorobromomethane	0.55 B	17 B
1,1-Dichloroethane		
1,2-Dichloroethane	0.38 B	37 B
1,1-Dichloroethylene	7 MCL	7,100
Dichloroethylene (cis-1,2)	70	
Dinoseb	7.0	
Diquat	20	
1,2-Dichloropropane	0.50 B	15 B
1,3-Dichloropropene	0.34	21
Endothall	100	
Ethylbenzene	530	2,100
Ethylene Dibromide	0.05	
Glyphosate	700	
Haloacetic acids	60 E	
Methyl Bromide	47	1,500
Methyl Chloride	F	F
Methylene Chloride	4.6 B	590 B
Ocamyl (vidate)	200	
Picloram	500	
Simazine	4	
Styrene	100	
1,1,2,2-Tetrachloroethane	0.17 B	4.0 B
Tetrachloroethylene	0.69 B	3.3 B
Toluene	1,000	15,000
1,2 -Trans-Dichloroethylene	100 MCL	10,000
1,1,1-Trichloroethane	200 MCL	F
1,1,2-Trichloroethane	0.59 B	16 B
Trichloroethylene	2.5 B	30 B
Vinyl Chloride	0.025	2.4
Xylenes	10,000	
2-Chlorophenol	81	150
2,4-Dichlorophenol	77	290
2,4-Dimethylphenol	380	850
2-Methyl-4,6-Dinitrophenol	13.0	280
2,4-Dinitrophenol	69	5,300
2-Nitrophenol		
4-Nitrophenol		
3-Methyl-4-Chlorophenol		
Penetachlorophenol	0.27 B	3.0 B
Phenol	21,000 10,4000	1,700,000 860,000
2,4,6-Trichlorophenol	1.4 B	2.4 B

Acenaphthene	670	990
Acenaphthylene		
Anthracene	8,300	40,000
Benzidine	0.000086 B	0.00020 B
BenzoaAnthracene	0.0038 B	0.018 B
BenzoaPyrene	0.0038 B	0.018 B
BenzobFluoranthene	0.0038 B	0.018 B
BenzoghiPerylene		
BenzokFluoranthene	0.0038 B	0.018 B
Bis2-ChloroethoxyMethane		
Bis2-ChloroethylEther	0.030 B	0.53 B
Bis2-ChloroisopropylEther	1,400	65,000
Bis2-EthylhexylPhthalate	1.2 B	2.2 B
4-Bromophenyl Phenyl Ether		
Butylbenzyl Phthalate	1,500	1,900
2-Chloronaphthalene	1,000	1,600
4-Chlorophenyl Phenyl Ether		
Chrysene	0.0038 B	0.018 B
Dibenzoa,hAnthracene	0.0038 B	0.018 B
1,2-Dichlorobenzene	420	1,300
1,3-Dichlorobenzene	320	960
1,4-Dichlorobenzene	63	190
3,3-Dichlorobenzidine	0.021 B	0.028 B
Diethyl Phthalate	17,000	44,000
Dimethyl Phthalate	270,000	1,100,000
Di-n-Butyl Phthalate	2,000	4,500
2,4-Dinitrotoluene	0.11 B	3.4 B
2,6-Dinitrotoluene		
Di-n-Octyl Phthalate		
1,2-Diphenylhydrazine	0.036 B	0.20 B
Fluoranthene	130	140
Fluorene	1,100	5,300
Hexachlorobenzene	0.00028 B	0.00029 B
Hexachlorobutidine	0.44 B	18 B
Hexachloroethane	1.4 B	3.3 B
Hexachlorocyclopentadiene	40	1,100
Ideno 1,2,3-cdPyrene	0.0038 B	0.018 B
Isophorone	35 B	960 B
Naphthalene		
Nitrobenzene	17	690
N-Nitrosodimethylamine	0.00069 B	3.0 B
N-Nitrosodi-n-Propylamine	0.005 B	0.51 B
N-Nitrosodiphenylamine	3.3 B	6.0 B
Phenanthrene		
Pyrene	830	4,000
1,2,4-Trichlorobenzene	35	70
Aldrin	0.000049 B	0.000050 B
alpha-BHC	0.0026 B	0.0049 B
beta-BHC	0.0091 B	0.017 B
gamma-BHC (Lindane)	0.2 MCL	1.8

delta-BHC		
Chlordane	0.00080 B	0.00081 B
4,4-DDT	0.00022 B	0.00022 B
4,4-DDE	0.00022 B	0.00022 B
4,4-DDD	0.00031 B	0.00031 B
Dieldrin	0.000052 B	0.000054 B
alpha-Endosulfan	62	89
beta-Endosulfan	62	89
Endosulfan Sulfate	62	89
Endrin	0.059	0.060
Endrin Aldehyde	0.29	0.30
Heptachlor	0.000079 B	0.000079 B
Heptachlor Epoxide	0.000039 B	0.000039 B
Polychlorinated Biphenyls	0.000064 B,D	0.000064 B,D
PCB's		
Toxaphene	0.00028 B	0.00028 B

Footnotes:

- A. See Table 2.14.2
- B. Based on carcinogenicity of 10⁻⁶ risk.
- C. EPA has not calculated a human criterion for this contaminant. However, permit authorities should address this contaminant in NPDES permit actions using the State's existing narrative criteria for toxics
- D. This standard applies to total PCBs.

KEY: water pollution, water quality standards

Date of Enactment or Last Substantive Amendment: April 1, 2010

Notice of Continuation: October 2, 2007

Authorizing, and Implemented or Interpreted Law: 19-5

BEFORE THE
UTAH WATER QUALITY BOARD

IN THE MATTER OF REVISING STATE WATER
QUALITY STANDARDS (*R317-2, UTAH
ADMINISTRATIVE CODE*)

ORDER

This matter came for hearing before the Utah Water Quality Board pursuant to notice given under the provisions of *Sections 19-5-110, Utah Code Annotated*, 1953, as amended, on the 28th day of September, 2011 in room 1015 of the Utah Department of Environmental Quality, Salt Lake City, Utah, for the purpose of considering revisions to *R317-2, Utah Administrative Code*, "Standards of Quality for Waters of the State."

The Board having taken cognizance of the oral and written statements received, and having fully considered all of the facts in this matter, it is therefore ORDERED that the revised "Standards of Quality for Waters of the State" (*R317-2, UAC*) be reissued effective April 1, 2012 with the changes as adopted by the Board on January 25, 2012.

Dated this 25th day of January, 2012

Paula Doughty, Chairperson
Utah Water Quality Board

4.85



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of Environmental Quality

Amanda Smith
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

MEMORANDUM

TO: Utah Water Quality Board

THROUGH: Walter Baker

FROM: John Kennington

DATE: February 13, 2012

SUBJECT: R317-8-9, "Pesticide Discharge Permit" Rule, Update on Rule Adoption
Comments, February 25, 2012 Water Quality Board meeting

This agenda item is to update the Board on comments that were received by the Division after the Board's October 25, 2011 approval to adopt the proposed subject rule, provided there were no adverse comments.

Background

As you are aware from two previous Board meetings, the Division of Water Quality was mandated to implement a program to permit the discharge of Pesticides under the auspices of the Clean Water Act and UPDES program by October 31, 2011, due to a February 9, 2009 US Sixth Circuit Court Decision.

As of the October 25, 2011 WQ Board meeting, the Division had already produced, public noticed and issued a general permit, the "Pesticide General Permit" (PGP) as the vehicle to regulate all entities (Operators) that must be covered under the permit program.

In the spirit of outreach and transparency, although not necessary, the Division decided to adopt the subject rule to better inform the regulated community of the substance and requirements of the permitting program. At the time of the October meeting the rule was in its public notice period, which was to expire on October 31, 2011. The Division had received no comments on the rule up to that point.

To adopt the rule as soon as possible, although the public notice period had not yet expired, the Division asked the Board to give a provisional approval to adopt the rule, if no adverse comments were received by the end of the comment period, on October 31, 2011. The Board agreed and passed a motion to that effect.

4.86

Update on Subsequent Comments - The DWQ received three comment letters after the October Board meeting as noted below. Copies of the letters are attached:

-On October 31, 2011 the DEQ received a letter from the Utah Water Users Association (UWUA) requesting an extension of the public notice (PN) period, citing inadequate notice of the PN period and inadequate time to respond. If the PN were not extended, the UWUA would "go on record to object to this proposed rule making on the basis that it adds more restrictive and cumbersome regulations to water users, especially the agricultural interests of Utah." In response, the DWQ extended the public comment period to Dec. 31, 2011 and notified the UWUA.

-On January 4, 2012 the DWQ received a letter from one member of the UWUA, the CSBR Co., a conglomeration of canal companies, headquartered in Delta, Ut. It argued that the pesticides necessary to run its business are otherwise regulated, and that this program would constitute needless additional regulation. The rule would unnecessarily add more expense and regulation to the process.

-On Jan 11, 2012 the DWQ received a communication from the Utah Department of Natural Resources (DNR) with an attached letter which argued that the recommendations are unnecessarily complicated, expensive and time consuming to implement, and significant staff time would be spent conforming to these rules. The letter objected to the disparity in requirements between government and private entities. It argued for a more efficient, less detailed regulatory framework. The DWQ believes that the DNR was misinformed regarding the number of Notices of Intent (NOI) and permit fees required.

DWQ Response to Comments

The DWQ agrees that this program constitutes additional regulation, but it's a program which the DWQ did not advocate for; it is regulation that was mandated by court decision. The program design is generally consistent with that which is being implemented by the EPA, for its five un-delegated states, and most of the other delegated states. It is the DWQ's intent to require only one NOI per operator (entity or agency) for the five-year permit term, and only one permit fee per agency per year. The proposed reporting requirement is for only one comprehensive annual report. The permit fees are proposed as a result of the present government climate to move toward fee supported programs.

It is the DWQ opinion that the program's technical requirements are reasonable and minimal to cause the program to be relevant and effective; and many requirements are already practiced under other regulatory programs. The permittees are requested to perform Integrated Pest Management (IPM) wherein they are requested to plan their applications such that they apply pesticides only when necessary, and at the optimum times and quantities. Effluent limits are in the form of implementing Best Management Practices (BMPs) with no numeric limits. No quantitative sampling is required, only visual monitoring and reporting of adverse effects.

As such, the DWQ proposes that the rule and program should proceed as proposed.

800 W 100 N
Delta UT 84624
Bs. (435) 864-2494
Fax: (435) 864-2264

Dolan K.

CSBR Company

December 29, 2011

Environmental Quality
Water Quality Room DEQ, Third Floor
195 N 1950 W
SALT LAKE CITY, UT 84116



RE: Rule 317-8

To Whom it May Concern:

We were told that the comment period for DAR File No. 35238, R317-8 had been extended through the end of the year.

We are a conglomeration of irrigation companies (Delta Canal Company, Melville Irrigation Company, Abraham Irrigation Company, Deseret Irrigation Company, and Central Utah Water Company) and have some objections to the proposed rule. The Rule concerns the use of pesticides in and around water. Many irrigation companies, including ours, use chemicals to control moss in irrigation canals and ditches, as well as to control vegetation along ditch banks. Many of these activities are essential for public safety and preventing canal breaks that could endanger the public. We are required to keep our canals safe by other governmental agencies. This rule just imposes tighter and more costly measures than already exist for us.

It is important to remember that the chemicals we use have already been reviewed and approved for use by the EPA in the canals and ditches and along the ditch banks. The pesticide (really herbicide) applicators are already licensed by the State of Utah. This rule would make it even more difficult to participate in activities that benefit the public welfare.

This is just an example of needless additional regulation. We, as irrigation companies, do our best to keep our canals safe, which includes using pesticides. It seems that this rule is unnecessarily adding more expense and regulation to the process.

Agriculture is a key part of the State of Utah's economy. These added rules restrict agriculture's ability to exist as it has in the past. As we continue to comply with each rule,

4.88

Document Date 12/29/2011



DWQ-2011-009016

December 29, 2011

Page 2

more rules are added, which seem to make it harder and harder to succeed. We ask that you rethink this rule.

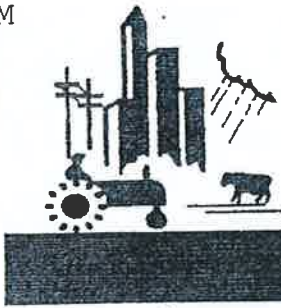
Sincerely,

Megan Greathouse

Megan Greathouse
Secretary

4.89

*S1M



UTAH WATER USERS ASSOCIATION

5047 S. Galleria Drive (360 West), Ste 210
Murray, Utah 84123
Phone: (801) 268-3065
Cell: (801) 560-2533
Fax: (801) 261-4069
E-mail: utahwaterusers@aol.com
Website: www.utahwaterusers.com

Carly B. Burton
Executive Director



October 31, 2011

Executive Committee

Blair Hamilton
President
Roy Watts
1st Vice President
Voneene Jorgensen
2nd Vice President
Ronald Thompson
NWRD Director
Terel H. Grimley
NWRD Director
Tage Flint
Past President
Dan Davidson
Dennis Strong
Ivan Ray

Mr. Mark Schmitz
Utah Division of Water Quality
UPDES Section
195 North 1950 West
Salt Lake City, Utah 84115

Re: Rule #317-8-9.1-Proposed Ruling on Use of Pesticides

RECEIVED

OCT 31 2011

DEPARTMENT OF
ENVIRONMENTAL QUALITY

Directors

Richard P. Bay
Clyde Bunker
Claudia Conder
Earl Cropper
Randy Crozier
Dan Davidson
Mike Davis
G. Keith Denos
Chris Finlinson
Bob Fotheringham
Tage Flint
Chris Fullmer
Terel H. Grimley
Blair Hamilton
LeRoy W. Hooton
Jay Mark Humphrey
Jerry Hurst
Brad Jensen
Norman Johnson
Voneene Jorgensen
Mark Kettle
Dannie R. McConkie
Ivan Ray
Steve S. Schnoor
Gawain Snow
Dennis Strong
Ronald W. Thompson
Dee Alan Waldron
Roy Watts
Mike Wilson
Scott Wilson

Dear Mr. Schmitz:

This letter is written on behalf of the 600 members who comprise the Utah Water Users Association. We have received numerous inquiries regarding the above-referenced proposed rule making for use of pesticides. Most of the members who inquired stated that they did not receive notice of this proposed new rule and, therefore, are unable to provide comments in a timely manner. We are advised that October 31, 2011 is the current deadline for submitting comments. We are therefore requesting the Division of Water Quality to extend the comment period for an additional 30 to 60 days in order to properly evaluate the proposed rule. If the comment extension is not granted then the Utah Water Users Association must go on record to object to this proposed rule making on the basis that it adds more restrictive and cumbersome regulations to water users, especially the agricultural interests in Utah.

Your attention to this important matter is greatly appreciated.

Sincerely,

Carly Burton
Executive Director

4.90

Document Date 10/31/2011



DWQ-2011-008653



GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Wildlife Resources

JAMES F. KARPOWITZ
Division Director

January 4, 2012

Judy Edwards
Public Lands Policy Coordination
Office of the Governor
5110 State Office Building
Salt Lake City, Utah 84114-1107

Subject -- RDCC No. 25580 -- Intention to Issue a Pesticide General Permit

Dear Ms. Edwards:

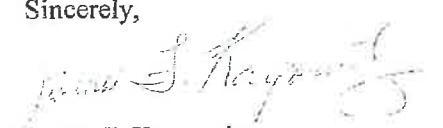
The Utah Division of Wildlife Resources (UDWR) has reviewed the proposed rule to administer a new Pesticide General Permit program and provides the following comments.

While we seek to support the Utah Department of Environmental Quality (DEQ) in fulfillment of their regulatory duties, the current recommendations are unnecessarily complicated, expensive, and time consuming to implement. Significant staff time and implementation costs are going to accrue to individual applicators and agencies trying to meet these new and unfunded regulatory demands. In addition, the cost of each Notice of Intent (NOI) may range up to \$1,000 per instance and, as written, UDWR would need to file more than a dozen NOIs each year to cover all of our weed control efforts state-wide. We contend that a more efficient, substantially less detailed, regulatory mechanism would address pesticide discharges in Utah without overly burdening applicators. UDWR would like to work with DEQ to help design a more efficient regulatory approach in which the general permit could serve the needs of state agencies and private pesticide applicators in Utah.

Another concern is the disparity in permitting requirements between private entities and government agencies. A private entity can apply pesticide to almost 10 square miles of wetland without having to file a NOI, whereas a government entity must file an NOI for any and all applications regardless of project size. DEQ should establish filing thresholds based on the class of proposed action and on the likelihood of experiencing environmental effects, then hold all parties, regardless of organizational characteristics, to the same thresholds and physical standards.

Thank you for the opportunity to review this proposed action and provide comment. If you have any questions, please call Bill James, Energy Development/NEPA Coordinator at (801) 538-4752.

Sincerely,


James F. Karpowitz
Director

JFK/clb/wej

4.91



R317-8, New Pesticide Rule Language Inserts into R317-8

(New rule changes are shown with Underlines and ~~Strikethroughs~~ in only the sections of R317-8 that are to be changed.)

R317-8-2. Scope and Applicability.

2.1 APPLICABILITY OF THE UPDES REQUIREMENTS. The UPDES program requires permits for the discharge of pollutants from any point source into waters of the State. The program also applies to owners or operators of any treatment works treating domestic sewage, whether or not the treatment works is otherwise required to obtain a UPDES permit in accordance with R317-8-8. Prior to promulgation of State rules for sewage sludge use and disposal, the Executive Secretary shall impose interim conditions in permits issued for publicly owned treatment works or take such other measures as the Executive Secretary deems appropriate to protect public health and the environment from any adverse affects which may occur from toxic pollutants in sewage sludge.

(1) Specific inclusions. The following are examples of specific categories of point sources requiring UPDES permits for discharges. These terms are further defined in R317-8-3.5 through R317-8-~~[8.10]~~9.2

- (a) Concentrated animal feeding operations;
- (b) Concentrated aquatic animal production facilities;
- (c) Discharges into aquaculture projects;
- (d) Storm water discharges;
- (e) Silvicultural point sources; and
- (f) Pesticide discharges.

(...existing, intervening R317-8 rule language not shown....
New Pesticide Rule Section R317-8-9 will be added to the end of the existing R317-8 rule as shown below.)

R317-8-9. Pesticide Discharge Permit.

9.1 APPLICABILITY.

(1) This section applies to qualified groups of operators who discharge on or near surface waters of the State from the application of (1) biological pesticides or (2) chemical pesticides (hereinafter collectively "pesticides"), when the pesticide application is for one of the following pesticide use patterns:

(a) Mosquito and Other Insect Pests - to control public health/nuisance and other insect pests that may be present on or near standing or flowing surface water. Public health/nuisance and other insect pests in this use category include but are not limited to mosquitoes and black flies.

(b) Weed and Algae Control - to control invasive or other nuisance weeds and algae in water and at water's edge, including irrigation ditches and/or irrigation canals.

(c) Aquatic Nuisance Animal Control - to control invasive or other nuisance animals in water and at water's edge. Aquatic nuisance animals in this use category include, but are not limited to fish, lampreys, and mollusks.

(d) Forest Canopy Pest Control - application of a pesticide to a forest canopy to control the population of a pest species (e.g., insect or pathogen) where to target the pests effectively a portion of the pesticide unavoidably will be applied over and deposited to water.

(2) Qualified Operator Groups. Certain types of entities (operators), engaged in the above pesticide use patterns, will be required to submit a NOI and obtain coverage under a Pesticide General Permit (PGP) as detailed below:

Operator Group 1 - All Operators involved with any discharges to Category 1 (R317-2-12) waters of the State. All operators involved in the discharge of pesticides on or near surface waters of State, which have been determined by the Water Quality Board to be Category 1 waters of the State must submit a NOI to obtain coverage under the PGP. The NOI must detail each area and watershed where a discharge is to occur. Only pesticide applications which are made to restore or maintain water quality or to protect public health or the environment would be covered under the PGP for discharges on or near Category 1 surface waters of the State.

Operator Group 2 - All Government or Quasi-Governmental Agencies or Special Service Districts. All government agency operators (federal, state, county or local agencies and special service districts) involved in the discharge of pesticides under the conditions described above, as a primary purpose or as a significant activity in their operations, must submit a NOI describing each area and watershed where a discharge is to occur to obtain PGP coverage regardless of the size of the area to be treated.

Operator Group 3 - Other Operators. Other operators engaged in the discharge of pesticides for the conditions described above as a primary purpose or as a significant activity in their operations, like private pest control companies, water supply or canal companies or other large operators whose discharges exceed the treatment area thresholds detailed in Table 2 below must apply for a NOI

to obtain coverage under the PGP as detailed in Table 1 below.

Operator Group 4 - Operators involved in a "Declared Pest Emergency Situation". All operators that otherwise aren't required to obtain a NOI, but become involved in a "declared pest emergency situation", as defined below, and will exceed any of the treatment area thresholds in Table 2 must submit a NOI to obtain PGP coverage as detailed in Table 1 below.

9.2 DEFINITIONS. The following definitions specifically pertain to aspects of pesticide discharge permitting in the UPDES program and should be used in conjunction with the definitions shown in R317-1-1 and R317-8-1.5.

(1) "Biological Pesticides" (also called biopesticides) means microbial pesticides, biochemical pesticides and plant-incorporated protectants (PIP). Microbial pesticide means a microbial agent intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or dessicant, that (a) is a eucaryotic microorganism including, but not limited to, protozoa, algae, and fungi; (b) is a procaryotic microorganism, including, but not limited to, Eubacteria and Archaeobacteria; or (c) is a parasitically replicating microscopic element, including but not limited to, viruses (40 CFR 158.2100(b)).

(2) "Biochemical pesticide" means a pesticide that (a) is a naturally-occurring substance or structurally-similar and functionally identical to a naturally-occurring substance; (b) has a history of exposure to humans and the environment demonstrating minimal toxicity, or in the case of a synthetically-derived biochemical pesticide, is equivalent to a naturally-occurring substance that has such a history; and (c) Has a non-toxic mode of action to the target pest(s) (40 CFR 158.2000(a)(1)). Plant-incorporated protectant means a pesticidal substance that is intended to be produced and used in a living plant, or in the production thereof, and the genetic material necessary for production of such a pesticidal substance. It also includes any inert ingredient contained in the plant, or production thereof (40 CFR 174.3).

(3) "Chemical Pesticides" means all pesticides not otherwise classified as biological pesticides.

(4) "Declared Pest Emergency Situation" means an event defined by a public declaration by a federal agency, state, or local government of a pest problem determined to require control through application of a pesticide beginning less than ten days after identification of the

need for pest control. This public declaration may be based on a; significant risk to human health; significant economic loss; or significant risk to Endangered species, Threatened species, Beneficial organisms, or, the environment.

(5) "NOI" means "Notice of Intent", the formal document submitted by an operator to the Division of Water Quality (DWQ) to request coverage under the Pesticide General Permit.

(6) "Operator" means any entity involved in the application of a pesticide which may result in a discharge to waters of the State that meets either or both of the following two criteria:

(a) The entity has control over the financing for, or the decision to perform pesticide applications that result in discharges, including the ability to modify those decisions or;

(b) The entity has day-to-day control of, or performs activities that are necessary to ensure compliance with the permit (e.g., they are authorized to direct workers to carry out activities required by the permit or perform such activities themselves).

(7) "surface waters of the State" means waterbodies, waterways, streams, lakes or rivers that contain standing or flowing water at the time of pesticide application.

(8) "Treatment Area" means the entire area, whether over land or water, where the pesticide application is intended to provide pesticidal benefits or may have an environmental impact. In some instances, the treatment area will be larger than the area where pesticides are actually applied.

9.3 ADMINISTRATIVE REQUIREMENTS.

(1) All operators who are included in the use patterns specified in R317-8-9.1, and discharge to active surface waters of the State as a result of the application of a pesticide must be covered by a UPDES permit, beginning October 31, 2011, by submitting a NOI to obtain coverage under the Pesticide General Permit (PGP). In the event that a discharge occurs prior to submitting a NOI, you must comply with all other requirements of the PGP immediately. All operators will automatically be covered under the PGP for the first five-year permit term of October 31, 2011 to October 30, 2016 if they submit a NOI by February 15, 2012. To obtain PGP coverage for the second and all succeeding PGP five-year terms, all operators must submit a NOI prior to the expiration date (October 30) of the PGP every five years. Each NOI submission will secure permit coverage for the full five-year term of the PGP.

(2) New, qualified operators, who require PGP coverage

after February 15, 2012 must submit a NOI in accordance with Table 1 below. The NOI will secure PGP coverage for the remainder of the five-year term of the PGP in effect at that time. For continued PGP coverage during the next five-year permit cycle, a new NOI must be submitted before the expiration of the present PGP, as detailed above.

Table 1. Discharge Authorization Date (a/)

<u>Category</u>	<u>NOI Submittal Deadline</u>	<u>Discharge Authorization Date</u>
<u>Operators who know or should have reasonably known, prior to commencement of discharge, that they will exceed an annual treatment area threshold identified in R317-8-9.3 (4).</u>	<u>At least 10 days prior to commencement of discharge</u>	<u>No less than 10 days after the complete and accurate NOI is mailed and postmarked.</u>
<u>Operators who do not know or would have reasonably not known until after commencement of discharge, that they will exceed an annual treatment area threshold identified in R317-8-9.3(4).</u>	<u>At least 10 days prior to exceeding an annual treatment area threshold.</u>	<u>Original authorization terminates when annual treatment area threshold is exceeded. Operator is reauthorized no earlier than 10 days after complete and accurate NOI is mailed and postmarked.</u>
<u>Operators commencing discharge in response to a declared pest emergency situation.</u>	<u>No later than 30 days after commencement of discharge.</u>	<u>Immediately, for activities conducted in response to a declared pest emergency situation.</u>

a/ In the event that a discharge occurs prior to your submitting a NOI, you must comply with all other requirements of the PGP immediately.

(3) PGP Coverage Termination. PGP coverage may be terminated by non-submission of a NOI at the end of the present PGP five-year term, or by submission of a signed Notice of Termination (NOT) form to the DWQ.

(4) Annual Treatment Area Thresholds.

Table 2. Annual Treatment Area Thresholds

<u>Rule Section</u>	<u>Pesticide Use Class</u>	<u>Annual Threshold</u>
-------------------------	----------------------------	-------------------------

R317-8-	Mosquitoes and Other	6,400 acres of
9.1(1)(a)	Insect Pests	Treatment Area
R317-8-	Weed and Algae Control	
9.1(1)(b)	-In Water	80 acres of treatment area a/
	-At Water's Edge	100 linear miles of treatment area at water's edge b/
R317-8-	Aquatic Nuisance Animal Control	
9.1(1)(c)	-In Water	80 acres of treatment area a/
	-At Water's Edge	100 linear miles of treatment area at water's edge b/
R317-8-	Forest Canopy Pest	6,400 acres of treatment area
9.1(1)(d)	Control	

a/ Calculations should include the area of the applications made to active surface waters of the State at the time of pesticide application. For calculating annual treatment area totals, count each pesticide application activity as a separate activity. For example, applying pesticides twice a year to a ten acre site should be counted as twenty acres of treatment area.

b/ Calculations should include the linear extent of the application made at water's edge adjacent to active surface waters of the State and at the time of pesticide application. For calculating annual treatment totals, count each pesticide application activity and each side of a linear water body as a separate activity or area. For example, treating both sides of a ten mile ditch is equal to twenty miles of water treatment area.

(5) All applicators or operators, whether or not falling into the use categories, or required to obtain PGP coverage, or whether or not meeting the minimum annual treatment area thresholds shown in R317-8-9.3(4) must conform to the Technology Based Effluent limitations in the PGP and to all applicable rules and regulations of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). The permittee is expected to familiarize himself with the PGP and conform to its requirements, if he discharges any pesticides prior to obtaining a NOI. After February 15, 2012 the permittee is authorized to discharge under the terms and conditions of the PGP only with submission of a completed electronic NOI in accordance with Table 1 above.

(6) Based on a review of the NOI or other information, the DWQ may delay authorization to discharge under the PGP or may determine that additional technology-based and/or water quality-based effluent limitations are necessary; or may deny coverage under this PGP and require submission of an application for an individual UPDES permit in accordance with this rule. If the Executive Secretary determines an individual UPDES permit is required, that permitting process will proceed independently.

KEY: water pollution, discharge permits

Date of Enactment or Last Substantive Amendment: April 7, 2009

Notice of Continuation: October 4, 2007



State of Utah

GARY R. HERBET
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

Water Quality Board
Paula Doughty, *Chair*
Steven P. Simpson, *Vice-Chair*
Clyde L. Bunker
Lou Ann Christensen
Merritt K. Frey
Darrell H. Mensel
Leland J. Myers
Amanda Smith
Gregory L. Rowley
Daniel C. Snarr
Jeffery L. Tucker
Phil Wright
Walter L. Baker
Executive Secretary

MEMORANDUM

TO: Water Quality Board

THROUGH: Walt Baker

FROM: Ben Holcomb

DATE: January 10, 2012

SUBJECT: Refinement of Utah Beneficial Aquatic Life Uses

Over the past couple of years several questions and concerns about appropriately protective water quality goals have been raised by the Board and other stakeholders, particularly with regard to development of nutrient criteria and TMDL implementation. DWQ has subsequently convened a group of stakeholders—under the Water Quality Standards Workgroup—to discuss how Utah's standards might be revised to better describe water quality goals (Uses) and associated management responses.

One possible solution, which has been successfully implemented by several States, is the development of "tiered" aquatic life uses. This approach would provide additional clarity to Utah's standards in two important ways. First, it would replace vague descriptions of aquatic life goals (i.e., cold water fish food web) with specific and objective descriptions that are directly tied to empirical field observations. Second, the associated "tiers" with these uses would appropriately acknowledge that human-caused degradation of aquatic life uses is best described as a gradient—from pristine to highly degraded—as opposed to the current binary descriptions of impaired vs. fully supporting uses.

DWQ will introduce this concept to the Board and discuss our proposed approach for the development of more-refined aquatic life uses.

Action Item

No immediate action, other than feedback, is requested from the Board at this meeting.

5.01

Background

The designated beneficial 'Aquatic Life Uses' (ALUs) in R317-2-6.3 (see Table below) were drafted *circa* 1976. Initially, these ALUs were sufficient for categorizing appropriate ALUs for Utah's waters. As our understanding of aquatic communities has improved, we have a better understanding of the continuum across biological conditions. Under our current, generalized ALUs, there is only a binary choice: either the water meets all of the numeric and biological criteria for that ALU or it doesn't. Therefore, the current ALUs undesirably limit the options for the Total Maximum Daily Load (TMDL) program for waters not meeting their beneficial uses (*i.e.*, impaired waters) and associated assessment methods:

1. There are no incremental benchmarks for comparing attainable ALUs or achieving 'recovery' of highly modified waters. Additionally, current target endpoints for impaired waters are indirectly tied to ALU measures and goals.
2. The corresponding numeric criteria lack adequate specificity when used in conjunction with current assessment methods and numeric criteria, which both have UPDES implications. Additional specificity of ALUs would ensure that future modifications to numeric criteria are neither over- nor under-protective of obtainable uses.
3. The current classifications of warm- and cold-water fishery food webs does not account differences among different classes of waters (*i.e.*, lakes, rivers, wetland), which complicates generalization about appropriately protective criteria for non-toxic pollutants.
4. Increasingly, Site-specific Standards (SSs) and Use Attainability Analyses (UAAs) are considered to address impaired waters. Both actions require a more specific understanding of the underlying uses these actions are intended to protect.
5. The specificity required of Utah's proposed methodologies for addressing nutrients will not fit well in the current broadly defined ALUs.

Utah's Aquatic Life Beneficial Uses (ALUs) R317-2-6.3	
Class	Description
3A	Protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain
3B	Protected for warm water species of game fish and other warm water aquatic life, including the necessary aquatic organisms in their food chain
3C	Protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain
3D	Protected for waterfowl, shore birds and other water-oriented wildlife not included in Classes 3A, 3B, or 3C, including the necessary aquatic organisms in their food chain
3E	Severely habitat-limited waters. Narrative standards will be applied to protect these waters for aquatic wildlife

5.02

Thus, the Water Quality Management Section is seeking significant amendments to the designated Aquatic Life Uses outlined in R317-2-6.3—the *Class 3* uses. We propose to investigate the formation of an ALU framework that is tied directly to a generalized stressor disturbance gradient, also known as a biological condition gradient (BCG), or formerly Tiered Aquatic Life Uses (TALU).

The BCG framework is derived from consistent and repeatable ecological responses to human perturbations. In different regions (i.e., ecoregions) and within different waterbody types, specific and objective rules are derived for placing sites into specific categories that describe the relative extent of degradation. This framework has been vetted with EPA and has already been adopted by many States, who consistently report significant improvements with communication and implementation of water quality programs.

DWQ anticipates creation of at least four BCG models: lakes/reservoirs vs. streams and cold- vs. warmwater food webs; although additional categories may be recommended following an empirical review of existing data. For each BCG model, a condition gradient is expected to be divided into about 6 tiers, each with specific rules that allow field observations to be directly translated into specific expectations (i.e. criteria and assessments), and, where appropriate, recovery goals. Because aquatic macroinvertebrate assemblages best reflect water quality and physical habitat conditions through time, they are most frequently used as the indicator to describe the relationship between biological condition to stress. Staff have collected and assessed these assemblages for several years and thereby poised to use these data to develop a BCG model and refined ALUs. However, other biological assemblages (i.e., fish and algae) and waterbody characteristics (i.e., habitat descriptors) will also be explored and may be incorporated into the BCG models if defensible thresholds can be identified.

One specific objective that would be bolstered by BCGs is the development and implementation of nutrient criteria and associated water quality programs. Discussions regarding appropriate nutrient reduction programs are ongoing, but most stakeholders agree that numeric criteria or water quality indicators should be interpreted in the context of related degradation to aquatic life uses. Such cause and effect approaches allow for site-specific characteristics that alter the extent to which nutrient enrichment alters the environment. Coupling nutrient reduction programs to more clearly defined BCG uses will more accurately account for gradients of nutrient-related responses. In addition, the tiers intrinsic in these models will facilitate the development of implementation programs that prioritize limited resources by helping to determine best attainable conditions. BCGs would also provide a framework whereby existing uses can be objectively reevaluated and adjusted (if appropriate) through Use Attainability Analyses (UAAs). The lack of BCGs does not preclude these important considerations, but more clearly defined water quality goals would provide consistent and objective context to important implementation considerations.

Path Forward

DWQ intends to issue an RFP that includes: 1) development of a variety of BCG models for streams and lakes in Utah, 2) convening several workshops to obtain expert input into BCG models, 3) preliminary analysis – the use of quantitative BCG rules to waters into appropriate tiers

5.03

with existing data, and 4) specific recommendations—based upon a review of other States for incorporation of the BCGs into Utah's water quality rules and programmatic processes.

Staff will review submitted proposals and identify funding options. Should Board funding be necessary, staff will provide a summary and selection recommendation to the Board, along with refined cost estimates and a proposed strategy to fund the work. Professionals experienced in developing BCGs for other States estimate that ~\$500K is an appropriate amount to expect for these products.

5.04



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

MEMORANDUM

TO: Utah Water Quality Board

FROM: Walter L. Baker, P.E.
Executive Secretary

DATE: November 23, 2011

SUBJECT: Work Meeting/Policy/Technical Issues for Discussion in 2012

Looking ahead to 2012, the Division would like to assist the Board in undertaking discussions on Technical and Policy items of interest. Following is a list of possible topics developed from the Division's current list of items. The Division would like to solicit the Board's input, prioritization and direction on topics of greatest interest in order to best utilize the Board's time and efforts in the coming year.

Possible Topics of Interest :

NUTRIENT CRITERIA AND RELATED POLICY ISSUES

1. Refined aquatic life uses/water quality goals-- Tiered aquatic life use approaches
2. Continuing nutrient criteria discussions: numeric indicators
3. Nutrient treatment requirements: Variance policies for existing facilities, minimum technology-based requirements for new POTW plants and plant upgrades
4. Ground water/surface water connectivity

GREAT SALT LAKE ISSUES

5. Great Salt Lake wetland assessment & evaluation; methods, data collected, etc.
6. Great Salt Lake numeric criteria development
7. Great Salt lake Water Quality Strategy

FUNDING AND BUDGET ISSUES

8. Water Quality Board fund utilization strategy session
9. Funding criteria; loans versus grants; local contribution
10. How to fund water quality science studies
11. DWQ budget

5.1

NON-POINT SOURCE ISSUES

- 12. Non-point source pollution control
 - a. State Non-point Source Management Plan – program overview
 - b. Audit Results for Utah's Non-point Source Program

STANDARDS AND ASSESSMENT ISSUES

- 13. Identification of impaired waters: Assessment methods and results for 2012
- 14. E-coli health advisories
- 15. 401 certification program

PERMITTING ISSUES

- 16. Storm water and wet weather pollution control permitting
- 17. Operating permits
- 18. Enforcement and penalty policy

LEGISLATIVE ACTIVITIES

- 19. Legislative activities

WASTEWATER PROCESS ENGINEERING 101

- 20. Technical presentations on types of wastewater plants in Utah and emerging technologies

TMDL IMPLEMENTATION/ENFORCEMENT ISSUES

- 21. Koosherem Reservoir: how do we enforce/implement the TMDL?

WATER QUANTITY VS. QUALITY POLICY ISSUES

- 22. How do we interface with State Engineer's Office?

Nutrient water pollution at issue in Utah

By Charles F. Trentelman (/authors/charles-f-trentelman)

Standard-Examiner (/category/author-organization/standard-examiner) staff (/category/author-type/staff)

Mon, 01/16/2012 - 5:38am

OGDEN -- The Division of Water Quality is studying how to get nutrients out of the state's water in a process that could end up adding hundreds of millions of dollars to Utah sewer bills.

But not all at once. The difference could be as little as a dollar a month on sewage bills, depending on where you live.

Nothing is decided, but what is certain is that much of the rest of the nation already has wide restrictions on nutrient pollution of water and the federal Environmental Protection Agency will put them into place in Utah if Utah doesn't do it first.

Plus, there are economic benefits.

<http://www.standard.net/stories/2012/01/14/nutrient-water-pollution-issue-utah>

1/17/2012

The Salt Lake Tribune

Utah board's banter reveals loophole in open meetings law

Transparency • A.G.'s office lays down law about compliance but also offers a way out.

By kirsten stewart

The Salt Lake Tribune

Published: December 27, 2011 09:36PM

Updated: December 27, 2011 10:06PM

Debate over Utah's Open and Public Meetings Act — specifically on how to get around it — enlivened recent meetings of the staid Defined Contribution Risk Adjuster Board, or RAB.

The discussion offered an unusually candid glimpse at a ploy used by government entities to skirt the law: meeting without a quorum in closed subcommittees.

Whether this strategy meets the spirit or letter of the law is a matter of debate.

"You can't escape the law through these types of gymnastics," said Jeff Hunt, a Salt Lake City attorney and advocate for open government.

But that's what Assistant Attorney General Perri Babalis finally told the RAB to do after the group balked at her original suggestion to advertise, record and keep minutes of subcommittee meetings.

An obscure state committee, the RAB was organized two years ago to make sure that insurers that market policies on Utah's Health Insurance Exchange set fair rates that are equal to what consumers can find outside the exchange.

Comprising primarily actuaries and industry executives and regulators, the RAB rarely draws an audience. Still, the board and its subcommittees must do business openly and in full view of the public, said Babalis in October, delivering her annual primer on the Open Meetings law.

"I have been asked in the past whether subcommittees need to comply, and the answer has always been no," she said. "But the opinion out of our office has changed."

State law defines a public body as any advisory or legislative body of the state and its subdivisions created by the Utah Constitution, law, ordinance, rule or resolution. A meeting is the convening of a public body with a quorum present, including workshops and executive sessions.

"Everyone has always gotten around the act by holding subcommittee meetings. So our office has decided

5.4

that's not appropriate," explained Babalis, noting that violation of the Open Meetings law is punishable by a class B misdemeanor.

Babalis said the revised opinion was made known in early October by Sheila Page, chief of the State Agency Counsel Division. What gave rise to it is unclear. The Attorney General's Office did not respond Tuesday to requests for information.

The news didn't faze RAB Chairman Jim Pinkerton, actuarial policy manager at Regence BlueCross BlueShield.

"We've used subcommittees as work sessions. We haven't excluded the public, but we haven't sent out a notice like we do on this meeting, and we haven't kept minutes. It doesn't sound like a terrible adjustment," he said.

But others objected, saying the onerous requirements would add costs and slow decision-making by boards across the state.

"This is like a whole new twist," said Brian Allen, former lawmaker and insurance-industry lobbyist, who has served on dozens of public bodies, most recently as chairman of the state Charter School Board. "I will guarantee you that nearly every public body in the state is out of compliance if that's the interpretation."

The conversation turned, half-jokingly, to turning subcommittees into chance social gatherings.

"Does [the public] have to be invited to parties?... like a Halloween party?" asked Nancy Askerlund, a state employee who does record keeping for the RAB.

Said Tomasz Serbinowski, an actuary for the state Insurance Department, "It almost begs for one to reconsider whether or not to just have volunteer groups established and not have [subcommittees] spelled out in the bylaws ... if that's what gets you in trouble."

Kim Miller of United Health Care pointed out that the RAB's underwriting subcommittee often discusses the health profiles of employee groups.

"Is that appropriate in a public setting?" she asked. "I would say 90 percent of what we do is not subject to discussion by full board because it's not a question of policy. It's about process and how to implement board rules."

There was talk of pushing legislation exempting RAB subcommittees from the law before the meeting closed with Babalis promising to research options.

She returned in December, reiterating that since subcommittees advise boards on matters of policy, they are public. But she offered an out.

"If you really want a way around [the law], make sure you don't have a quorum at any subcommittee meeting," said Babalis. "Only a quorum can conduct business. So, if you do not have a quorum, then the notice requirement, keeping minutes, all of that goes away."

With the RAB that means having four members of the full seven-member board present, which only poses a hurdle for one subcommittee, said Pinkerton. Other subcommittees include fewer than four members.

Attorney Jeff Hunt disagreed and said the law stands as long as there's a quorum of the subcommittee.

5.5

The law already allows for some exemptions. Boards can close meetings to talk about real estate purchases, pending litigation, personnel matters or an individual's character, competence or physical and mental health.

And while there are administrative costs in complying, said Hunt, "that's the price we pay for openness and accountability."

kstewart@sltrib.com Twitter: @kirstendstewart

© 2011 The Salt Lake Tribune

5.6

KSL TV KSL Newsradio 7

Login Feedback Contact Us

>> Utah

Enter Keyword

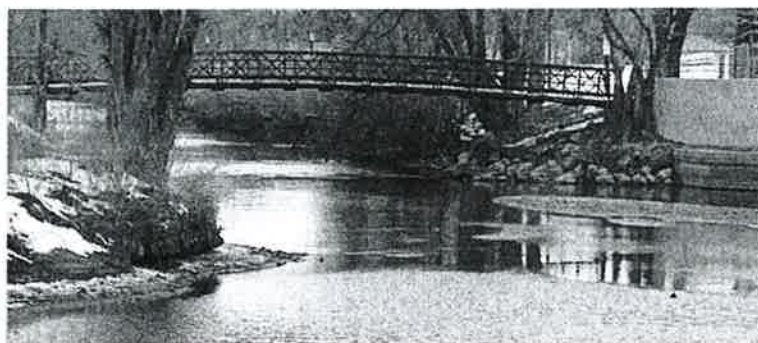
all of KSL



Utah Page Two U.S. World Sports Weather Traffic Biz Entertainment Shows More

Classifieds Cars Homes Jobs Local Deals

Local Stories KSL 5 News Investigations Tough Times Survival Bank Staying Safe Statecraft: Government & Politics Sunday Edition



About this ad

5 Comments

Post or read comments

SALT LAKE CITY — The Utah Division of Water Quality's is seeking public comment on the first part of a draft water quality study on the impact of low dissolved oxygen levels in the lower Jordan River.

Excess organic matter in the lower Jordan River during late summer is contributing to the low dissolved oxygen levels that may hurt fish and other aquatic organisms, said the DWQ in a press release.

An open house will be held from 4-6 p.m. on Tuesday, Feb. 21, in the DEQ's board room 1015 at the Multi-Agency State Office Building at 195 N. 1950 West.

The comment period will run through March 31. The draft study is available at <http://www.waterquality.utah.gov/TMDL/JORDAN/index.htm>. Comments must be submitted via email to hilaryarens@utah.gov or via mail to Hilary Arens, Division of Water Quality, P.O. Box 144870, Salt Lake City, UT 84114 no later than close of business on March 31, 2012.

Responses to comments will be compiled and presented with the draft TMDL study to the Utah Water Quality Board for approval to proceed with the next phase of the study and endorsement for future water quality improvement efforts.

The second phase will identify the causes of the low dissolved oxygen, which will lead directly to an implementation strategy to restore the river, the release said.

In the end, the so-called Total Maximum Daily Load study will establish the threshold on the daily dose of pollutants to bring the river into compliance with state and federal water quality standards.

If you go

Open house
Tuesday, Feb. 21, 4-6 p.m.
Multi-Agency State Office Building, DEQ board room
1015
195 N. 1950 West, Salt Lake City

The comment period will run through March 31

- Submit to hilaryarens@utah.gov
- Or mail to Hilary Arens, Division of Water Quality
P.O. Box 144870
Salt Lake City, UT 84114

Most Popular

Read Video Commented Desert News

1. Model LDS temples — Lego and wooden — via
2. Family of starved man awarded \$144K in ...
3. Court upholds charges against couple ...
4. High school sweethearts move into 'Up' ...
5. Ogden officers given Sunday off to rest

Latest Videos



Gunman robs pizza shop
Posted 46 minutes ago
Tweet/Share



Family of starved man awarded \$144K in settlement
Posted Jan 9th - 7:12pm
Tweet/Share



Romney attacked on all fronts in final NH debate
Posted Jan 9th - 10:14pm
Tweet/Share



Ogden officers given Sunday off to rest
Posted Jan 9th - 3:56pm
Tweet/Share



Ping pong tournament takes sport to next level
Posted Jan 7th - 10:33pm
Tweet/Share



High school sweethearts move into 'Up' house
Posted Jan 7th - 10:19pm
Tweet/Share

<< 1 2 3 4 5 6 7 8 9 10 11 >>

About this ad

Advertisement

About this ad



5.7

